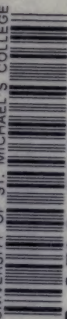


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St. Mary's Cathedral

INTRODUCTION TO ECONOMICS



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INTRODUCTION TO ECONOMICS

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PREFACE

THE attempt is made in the following pages to present the elementary principles of economics clearly and in a small compass. The author trusts that this presentation in brief form will prove helpful not only to the general reader but also to the student who is making a beginning in economics and who often finds that the diffuseness of the text serves to obscure the principles which he is trying to grasp.

The present work is an *introduction* to economics. It attempts to lay the foundations for economic reasoning rather than to say the final word on the great present-day questions of economic policy. Ethical and practical problems are not ignored, but in the interest of clearness of reasoning it is necessary first to establish the positive facts and principles. It is of course unnecessary to say that the author is an adherent of the view that economics is an ethical science.

It is hoped that the questions at the ends of the chapters will be found useful in reviewing the matter. The references to works on economics have been made with the idea of bringing to the attention of the student a small number of readily accessible books which he will read. For this reason it was thought desirable to refer to a few standard general treatises rather than to a larger number of books of a more special character.

The debt of the present writer to the authors cited will be readily apparent to the reader but he is no less indebted to a great many others to whom on account of their number no reference could be made. It is a special pleasure to him to record his obligations to his former teachers in the University of Berlin, Professors Wagner, Schmoller and Sering. These obligations are much greater than a cursory reading of the book will reveal.



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INTRODUCTION TO ECONOMICS

CHAPTER I

DEFINITION

1. Economic activities. — Nature furnishes freely and without trouble to man many of the things that he needs. She furnishes him air to breathe, water to drink, and daylight in which to work or play ; but there is another class of needs which nature supplies only on the condition that man co-operates with her efforts. Man must have food, for example, and this he can have in sufficient quantity to satisfy his need only if he is willing to assist nature in producing it. Clothing and shelter and a great many other things are to be had only on the same terms. Food, clothing, shelter, and other desirable things of which the supply is limited are called *wealth*, provided that they may be owned and that they are external to the owner. Thus there are four characteristics of wealth. A thing, to be wealth, must be desirable, limited in quantity with respect to the demand for it, appropriable, and external to the owner. The word “ economic ” has several meanings one of which is *relating to wealth*. Economic activities, therefore, are those activities which relate to wealth, or in other words, those activities concerned with things which men desire, things relatively limited in quantity, appropriable, and external to the owner. Economics or political economy is the science of economic activities.

2. Economics is a social science. — One could easily imagine a world in which economic activities were individual

activities in the sense that each person was active only in providing for his own needs. But the world in which we live is not such a world. Here economic activities are social activities. The individual helps other individuals to secure the things which they need, and they in turn help him to secure the things which he needs. Ten thousand persons assisted you in the preparation of to-day's dinner and you repay the obligation by working for ten thousand other persons who indirectly pay the price of the dinner to the first ten thousand persons. Our economic life is a life of coöperation. Economic activities are social activities, and economics or the science of economic activities is a social science.

3. Sciences are differentiated by point of view as well as by subject matter. — Here is a teacher giving a music lesson to a class of children. This is a social activity. Within the province of which of the sciences does it fall? Our answer depends upon the point of view from which we regard it. Are we interested in knowing whether or not the teacher's methods of instruction are sound? If so, our scientific study of the activity falls within the field of the science of education. If we desire to know the influence of the music on the mind of the children, our interest is psychological. If, however, we consider the teaching as a means by which the teacher earns her livelihood or as a preparation for the children to earn their livelihood, or as a means by which their desire for music is gratified, our interest is economic, and our study falls within the boundaries of economics, and we speak of the activity as an economic activity. The fact remains that it is more than an economic activity, but for the time being we are interested in it only as an economic activity. But we shall never be able to understand perfectly the activity of the music teacher as an economic phenomenon, unless we understand it also as more than an economic phenomenon. Certain human activities make up the subject matter of

economics, but these activities cannot be absolutely separated from the human activities which form the subject matter of other sciences. The difference in the point of view from which we regard the subject matter of the social sciences quite as much as difference in the subject matter itself, distinguishes these sciences from one another.

4. The relation of economics to other sciences. — Economics is closely related to many other sciences. The whole discussion of value, as we shall see, depends intimately upon considerations of psychology. In fact, the school of economics which has developed farthest the theory of value is often referred to as the Psychological School. Sociology is sometimes defined as *the* social science, that is, the science of all social relations. If sociology is considered in this sense, economics is a branch of sociology. Other writers hold that sociology deals only with the more general laws which apply to the whole social structure and that it is coördinate with economics and politics and ethics, and not inclusive of them all.

Politics is the science of the state and because of the many and important ways in which the state influences, and is influenced by the manner in which its people make a living, the fields of the two sciences are closely interwoven and have many problems in common. Ethics is the science of moral conduct. It asks the question, *what ought to be*. There was a time when economists held that economics was concerned only with the question, *what is*, and not with the question, *what ought to be*. But to-day practically all economists hold that economics is an ethical science as well as a positive science, that is, it is concerned with *what ought to be* in the economic sphere, as well as with *what is*. Just as economics is closely related to the science of politics so it is also closely related to the science of law. Government and law form a framework in which economic forces act.

5. **The meaning of economic laws.** — The term *law* is used in several senses. For example, in jurisprudence it means a rule of conduct set up by a state for the guidance of its subjects. But in the sciences generally, where there is regularity in recurrence of phenomena we say there is scientific law. Where the phenomena which recur with regularity are economic phenomena, that is, where they have to do with man's relations to wealth, we have economic laws. For example, when men melt gold coins to secure bullion, they usually melt full-weight coins, in preference to coins which are much worn and therefore light. The regularity of such action is an economic law, and is of much consequence in economics.

6. **Economic law and the freedom of the will.** — It is sometimes urged that economic laws are not real laws because they are concerned with human actions and that since the will is free, there will not be sufficient regularity in these actions to permit them to be called laws. This contention, however, fails to take into account the meaning of economic laws. A person is not compelled to obey economic laws, but the motives which influence him in dealing with economic phenomena will usually lead him to act in accordance with economic laws. Thus, the man who melts gold coin to secure bullion is perfectly free to melt the lighter coins. But the motive of self-interest will usually lead him to melt full-weight coins.

7. **The division of the field of economics.** — The science of economics has to do with man in his relations to wealth. For convenience in discussing the subject, many writers divide the field of economics into four principal sections, namely, the *consumption* of wealth, the *production* of wealth, the *exchange* of wealth, and the *distribution* of wealth. Briefly expressed, the consumption of wealth means the using of wealth; the production of wealth means the bringing into

existence of wealth ; the exchange of wealth means the transferring of the ownership of wealth from one person to another in consideration of a corresponding transfer of ownership of other wealth from the latter to the former ; and the distribution of wealth means the sharing of the wealth which has been produced among those who have claims to it. In the following chapters the four subjects will be treated in the order named. But before proceeding to a consideration of the consumption of wealth we shall take up in Chapter II a brief summary of economic history.

QUESTIONS

1. What is meant by economic activities?
2. What is wealth?
3. Define economics.
4. Enumerate ten different groups or classes of workers who have aided in supplying you with to-day's dinner.
5. Why do we say that economics is a social science?
6. Name some activity which is the subject matter of several different sciences. Of which sciences?
7. What other sciences are closely related to economics?
8. What is meant by an economic law?
9. Do economic laws conflict with the freedom of the will? Illustrate.
10. What are the four usual divisions of the field of economics?

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DEVAS, Political Economy, Epilogue, Part I.

ELY, Outlines of Economics, Chap. i.

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KEYNES, Scope and Method of Political Economy, Chaps. ii. and iii.

MARSHALL, Principles of Economics, Book I.

SELIGMAN, Principles of Economics, Chaps. i. and ii.

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CHAPTER II

ECONOMIC DEVELOPMENT

8. The economic stages. — The consideration of the economic stages through which society has progressed in arriving at its present development will contribute to a clearer understanding of our present economic system. These stages have been variously classified. For our present purpose the classification of economic stages into first, the stage of *independent household economy*, second, the stage of *town economy*, and third, the stage of *national economy* will be useful.

9. Independent household economy. — No matter how far back in economic history we go we shall always find that the production of wealth is a social rather than an individual phenomenon. In the first stage production was by the family or the clan. The family group produced directly for itself the things which its members needed. This independent household economy was self-sufficing; no goods needed to be brought in from outside the family organization. Goods were produced and consumed within the family. There was no exchange of goods. As a general thing the men carried on one class of occupations and the women another, but among the members of each sex there was little or no differentiation of occupation. The essential feature of this stage was *production by the household for the household*, without exchange. As a result of a long process of development during which the household learned to produce a surplus, wants were developed which had to be supplied from outside the household, and the second economic stage appears.

10. The stage of town economy. — Through a long period of development the former self-sufficing household economy ceased to be self-sufficing and came to depend upon outsiders to supply many of its needs. This second stage is represented by the medieval town. The different trades grew up within the town and the right to trade within the town and in the surrounding country was monopolized by the townsmen. The products of artisans of other towns were admitted to the town market only under severe restrictions. The market of the town was for the craftsmen of the town. Here the peasant of the surrounding country brought his products and exchanged them for the products of the town craftsmen. The producer produced no longer exclusively for himself as in the household economy, but for the consumer whom he met face to face in the market. There was no middleman, no merchant who bought cheap and sold dear and thus made his living. The selling in the market was done by the people who produced the wares. Goods which could not be produced in the town might, of course, be introduced from other towns, but the general principle was observed, that nothing which could be produced in the town was to be imported from abroad.

But alongside the system of town economy, there was growing up another system. Merchant princes engaged in foreign trade, and brought the goods of the Orient to Europe. America was discovered and with the discovery the European supply of gold and silver was increased. Gunpowder was invented and with its invention and with money to pay standing armies, modern nations were developed. The special monopoly of the townsmen now stood in the way of the interest of the great traders and of the growing modern states. The town economy was gradually being overthrown and in its place was substituted the national economy.

11. The national economy. — It now became the purpose

of the leading statesmen to encourage a nation-wide trade by removing the local restrictions that surrounded the individual towns. The town economy had been carried on with little or no money, since the producer dealt directly with the consumer and paid him in his product. But for a national economy, money was necessary, and statesmen planned to secure the money by raising tariff walls around the country, and encouraging the exportation, and discouraging the importation of goods in such a way as to encourage the importation of money. This was the essence of the *mercantile system*, which was not without merit in its day, but which later degenerated into an abuse and which has been widely criticized in recent time as though it had always been lacking in merit. With the development of national economy the producer produced no longer for the consumer but for the market. Each section of the country produces now not all that it needs, but what it can produce advantageously, and it relies upon other sections of the country to satisfy its needs through an exchanging of commodities. To sum up the development: in the days of household economy, blood relatives coöperated to produce what they needed. At the stage of town economy, those who lived in the neighborhood of the same town coöperated to make a living, while in the third stage, the whole nation coöperates with that end in view. And while nation is often hostile to nation in matters of trade there is also a growing coöperation among nations, so that all the time we are becoming more dependent upon others for our living. But as we become more and more dependent upon our neighbors we gain in our ability to secure the things for which men labor; we are enabled to secure a better living with less effort than was necessary when our independence was greater.

12. The development of business enterprise. — By a business enterprise we mean an undertaking which is entered

into for the purpose of making a profit. As a general thing there are two sides to the business enterprise. First there is the technical side of the organization of production, and secondly, the commercial side of the purchase of materials and the sale of the product. The enterpriser or undertaker is the person who organizes the business and who attempts to secure for himself a margin between his expenditures in the business and the selling price of his product, — in other words, profit. In the preceding paragraphs of this chapter we have discussed the different stages through which society has passed in its efforts to secure a living for its members. In the following paragraphs we shall consider the different steps that have been gone through in the development of the modern business enterprise. These steps we shall characterize as, first, the housework system; second, the hire system; third, the handicraft system; fourth, the commission system; and fifth, the factory system.

13. The housework system. — This system corresponds in point of development with the first stage of economic development which we have spoken of above, independent household economy. The housework system of production is not yet a business enterprise. It is a sort of introduction to enterprise. There is no buying and selling and there is no profit. Production is by the members of the household and directly for the members of the household. The household was busy, but it was not engaged in business enterprise in the sense of producing for profit.

14. The hire system. — A step was made in the development towards modern business enterprise when the worker who had heretofore worked in and for the household developed a special skill which he undertook to sell to neighboring households. This was the beginning of the hire system. The worker went from place to place stopping temporarily with the households which needed his services and which paid

him in addition to his board, and possibly his lodging, a wage for his work. The traveling carpenter or tailor will serve as an example. But the worker instead of going to the families which required his services might have a place of business of his own to which his customers came with the materials upon which they wished him to work. This is exemplified by the medieval miller or baker, to whom customers brought wheat or flour and from whom they received their flour or bread after a deduction had been made for the service performed. In the hire system, while the tools and even sometimes elaborate machinery might belong to the worker, the material upon which the work was done belonged to the customer. The services of the worker were sold to the customer but there was no possibility of making a profit on the material itself.

15. The handicraft system. — In the next step of development towards modern business enterprise, the worker purchased the materials and worked upon them with his own tools. Instead of selling his labor he sold the finished product to the customer. This was the handicraft system. It was definitely a business enterprise. This step as well as the preceding one corresponds generally with the second stage in economic development, namely, town economy. The gild system of the Middle Ages embraced both the hire system and the handicraft system.

16. The commission system. — In the third economic stage of national economy with the development of national and international markets, there grew up a class of business enterprisers whose business it was to supply goods for these wider markets. The workers under the hire system and under the handicraft system each produced goods for a number of customers, with whom they came into actual contact. Under the commission system a number of these workers worked for one employer. He furnished the raw material

and paid wages, or he purchased the products of the craftsmen and attempted to secure a profit by selling them at a favorable price in the market. The craftsmen who formerly met their customers face to face and produced for a number of customers were relatively independent. Under the commission system many workers produced for one business man or merchant and they never met the ultimate consumer. The result was a very considerable loss in independence for the workers.

17. The factory system. — Under the commission system the employer's main interest was directed towards marketing the laborers' product. Under the factory system the employer not only markets the product but he also organizes and directs production. He brings together workers who are able to perform the various operations required in making the product and he furnishes them with a work place. He secures the requisite tools and machinery and he purchases the materials upon which the laborers are to work. He multiplies wonderfully the efficiency of the workers by harnessing mechanical powers such as steam and electricity to perform the more laborious tasks. He divides and simplifies the work and assigns workmen to the tasks according to their skill and strength. In this manner he economizes labor. The factory system, it has been well said, compares with the commission system as a well-organized and well-equipped regular army compares with a motley volunteer militia. The change from the commission system to the factory system brought such important consequences for industry that it is usually referred to as the Industrial Revolution. The Industrial Revolution which took place in England in the latter part of the eighteenth and the beginning of the nineteenth century involved great improvements in the methods of agriculture and transportation as well as in those of industry. But the change to the factory system

which accompanied the division of labor and the introduction of improved machinery was the most prominent feature.

18. The Industrial Revolution in the United States. — The United States has passed very rapidly through the process of development leading up to the factory system. Among the earliest settlers the housework system prevailed. Although there was some exchange with the Old World each family was thrown upon its own resources and was compelled to produce for the most part the things which it needed. The introduction of slavery and of the system of indentured servants was a preliminary step in the direction of the wage work system in which the free worker sold his labor to such customers as desired it. Then came the handicraft system, when skilled workmen sold the products of their labor, not the labor itself, to their customers whom they met face to face. This step was followed here as in Europe by the commission system, as the market was widened through improvements in methods of transportation and facilities for exchange. The development did not proceed regularly and uniformly in all parts of the country. But the various steps may all be recognized in a general view of the history of industry in this country.

In the northern states the time was ripe for the introduction of the factory system on a large scale in the early part of the nineteenth century. Owing to the disturbance to commerce caused by the Napoleonic wars and our war with England (1812-1816) we could no longer depend upon a supply of manufactured goods from Europe, and a great impetus was thus given to the development of factories in this country. After the war of 1812 protective duties were levied upon goods coming into this country and this tended to ward off European competition and gave our young industries a chance to develop. We had by that time definitely adopted the factory system in the North and with the later develop-

ment of canals and railroad transportation, the factory came to be a more important factor in the economic life of that section of the country. Steadily the factory system pushed its way westward. But the South on account of its predominating agricultural interests and its peculiar institution of slavery was slow to follow the lead of the North. In recent decades, however, it too is rapidly developing the factory system.

19. The factory system does not entirely supplant the earlier forms of enterprise. — Alongside of the present factory organization many households still produce much that they consume and to that extent the housework system still exists. There is still much hiring of labor by the individual household. Independent handicraftsmen still purchase raw material and work it up and sell the finished product. Middlemen still distribute the raw material of their industry among the workers in their homes and pay by the piece for the work done, while they themselves accept the risk of finding a market for the finished product. So the housework system, the hire system, the handicraft system and the commission system continue their existence along with the factory system. The factory system, then, has not supplanted the other systems. It has simply been added to them. But it is the most striking and remarkable feature of our present industrial system.

QUESTIONS

1. Name the economic stages through which society has passed.
2. In the first stage what was the economic relation of the household to neighboring households?
3. Was there an exchange of goods at this stage?
4. How did the second stage differ from the first?
5. What was the mercantile system?
6. How did the stage of national economy differ from the stage of town economy?

7. What is meant by business enterprise?
8. What steps in the development of modern business enterprise are mentioned in the text?
9. Explain the difference between each of these steps and the next succeeding one.
10. What is meant by the Industrial Revolution?
11. Do the earlier forms of enterprise disappear with the appearance of the later forms? Illustrate.

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CONSUMPTION



CHAPTER III

WANTS — UTILITY — DEMAND

20. The meaning of consumption. — By the consumption of wealth is meant the using of wealth in the gratification of human wants ; the carrying out of the purpose for which the wealth was produced. Consumption does not involve primarily or even necessarily the destruction of the thing which has been produced. It is true indeed that such destruction is usually attendant upon consumption but it is not essential to it. The essence of the consumption is the utilization of the thing, the gratification of the desire. Thus, coal in being consumed for the purpose of furnishing heat changes its form and is no longer coal ; a painting, on the other hand, is consumed in the economic sense not by having its form changed but by being placed upon the wall and being seen and enjoyed. Under the head of consumption we study wants, and their satisfactions.

21. The expansive nature of wants. — There are certain primary wants or desires which must be satisfied at any cost, such as the desire for a sufficient quantity of food to preserve life or for enough clothing to keep us from freezing to death. As soon as these absolute wants are satisfied they are followed by other wants, — as, for example, when we have had sufficient food to keep us alive we then desire enough to make us feel comfortable, or we desire variety, of which the man who is suffering the pangs of hunger does not think. Similarly with clothing, it is only after we have sufficient to keep us warm that we feel the need of having it conform to the prevailing fashion.

The principle is of general application. As soon as our most urgent needs are taken care of, other needs differing in degree and in kind spring into consciousness to take their places. While individual wants may be satisfied, all man's wants here below are never satisfied. It is because of his desire to satisfy his wants that man is driven to economic activity. And his activities in turn serve to arouse in him new wants which demand satisfaction.

22. Goods defined. — We say that a thing is good if it serves as a means to a desired end or purpose. We may therefore define a good as a thing which satisfies a want. Many of our wants are satisfied by goods which exist in such plenty that we need not give a thought to securing them. Thus, the air we breathe and the water we drink are free gifts of nature. We can obtain them without the exertion of conscious effort. We call such things *free goods*.

On the other hand a great many of our wants are gratified by goods which are limited in quantity in comparison to the wants to which they minister. As a usual thing such goods can be had only by the expenditure of effort. Goods which are scarce, that is, limited in relation to the wants which they gratify, are called *economic goods*. Personal services gratify wants, and are therefore, strictly speaking, goods. Free goods, as distinguished from economic goods, are not wealth.

23. The meaning of utility. — We say that a thing is useful or that it has utility when it may be used to gratify a want. Utility, then, means a capacity to gratify a want. Just as we speak of both flour and whiskey as goods because they both serve to gratify wants, so too, we say that both possess utility. The terms *good* and *utility* as used in economics refer equally to things that are morally good and to things that are morally bad.

We must not suppose that the utility or want-gratifying

capacity of the good is something intrinsic in the good and independent of the consumer of the good. On the contrary, the utility of the good depends upon the wants of the consumer as well as upon the qualities of the good. The utility of the good will be different for different consumers. But it will also be different for the same consumer at different times and under different conditions of supply of the good. For example, apples may be used for a number of purposes. If they are used to satisfy man's need for food directly they are comparatively useful. If they are used to satisfy his need indirectly by being used to feed animals which furnish him food, they are relatively less useful. In the one case they possess much utility and in the other less utility. Or again, if a boy has five apples exactly alike in size and quality and he consumes them one after another, as a general thing the first will gratify a greater want than the second, the second will gratify a greater want than the third; and so on for the five. The first apple consumed has greater utility than the fifth. Simply owing to the fact that it is the first apple consumed, it happens to be used to gratify a keener desire. Perhaps by the time the fifth apple is consumed the boy's appetite has disappeared. He has not cared greatly for the fifth apple. It is clear, therefore, that the utility of the good depends not alone upon the quality of the good but also upon the nature of the want which it happens to gratify and upon the supply of the good.

24. The law of diminishing utility. — If we make an examination of our various wants we shall find as a general thing that they follow the principle illustrated by the case of the boy with the five apples. Any one of our earthly desires is capable of being completely satisfied for the time being if we can only get possession of a sufficient quantity of the appropriate goods with which to satisfy it. If now we should divide this total amount into five equal parts,

we should find as a general thing, in spite of the fact that the five parts are all equal and similar, that the first part which is consumed gratifies a more intense want than the second, that the second part gratifies a more intense want than the third, and so on for the five.

There are some apparent exceptions to this general principle. For example, many persons have no appetite for olives, but after they have eaten a certain amount of them a taste for them develops and they eat them with great relish. In cases of this kind the second or the third unit of the good might give more intense gratification than the first. This, however, is only an apparent exception to the general principle for the reason that it is not the original want which has been gratified by the later units of the good, but a new and more intense want.

These facts are summed up in the law of diminishing utility which states that in the satisfaction of a want, *each additional unit of the good consumed gives less gratification and hence possesses less utility than the previous unit consumed*, assuming that the units are all equal in quantity and quality and that the character of the want does not change in the meantime.

25. Total utility and marginal utility. — In the illustration in § 23, when the boy had eaten the first apple, he experienced a certain amount of gratification, the result of a certain definite utility. The second apple had a smaller utility than the first. As the number of apples consumed was increased the total utility, that is, the sum of the utilities of the individual apples consumed, was increased. But the more apples he ate, the less was the satisfaction received from, or the utility of, the last apple consumed. When he had consumed the fifth apple his desire for apples was fully satisfied. If now being given a sixth apple he consumed it he would receive no satisfaction from it. Its utility would be nothing. Sometimes the utility of this sixth apple is

spoken of as the marginal utility of the apples and in this sense the marginal utility is always zero.

But the term marginal utility is most commonly used in another sense. It is used to indicate the utility of the last unit of the good which is actually consumed. Thus if the boy ate three apples only, the utility of the third apple would be called the marginal utility of the apples, whereas, if he ate four apples the utility of the fourth apple would be called the marginal utility of the apples. If, then, the boy with the five-apple appetite had only three apples, we shall say that the marginal utility of his supply was the utility of the third apple. The actual utilities of these three apples were all different but their potential utilities were the same for the reason that the second apple could have been substituted for the first or for the third without inconvenience to the boy. To sum up: as we increase the number of units consumed we increase the total utility, but we diminish the marginal utility.

The foregoing principle may be illustrated graphically by the accompanying figures. The units of the supply of the good (apples in this case) are measured along the line OX of the first figure and the utilities of the different units are represented by rectangles parallel to OY . Thus area a represents the amount of utility received from the consumption of the first unit consumed (the first apple), area b the amount of utility received from the consumption of the second unit, and so on for the five units. If a sixth unit were to be consumed, it would not give satisfaction to the consumer, *i.e.* it would not possess utility. This is represented in the figure by placing one half of the sixth rectangle above the line OX and one half below. The consumption of the first half of the sixth unit represents a utility or the satisfaction of a desire; the consumption of the second half of the sixth unit represents a discomfort or a *disutility*. Assuming that

the disutility just equals the utility, it is a matter of indifference to the consumer whether or not the sixth unit is consumed.

When two units of the good have been consumed the *total utility* received is represented by the area *a* plus the area *b*,

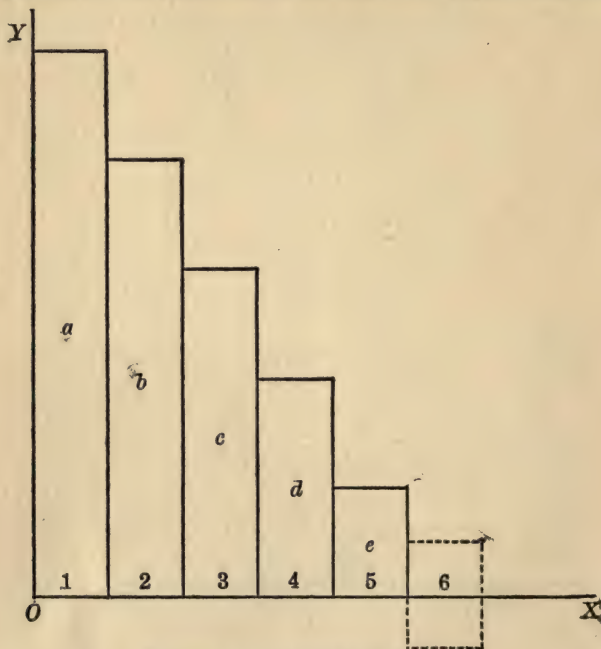


FIGURE I. — Diminishing Utility.

while the *marginal utility* of the first two units is the utility of the marginal or last of the two units, or area *b*. When three units have been consumed, the total utility is represented by the sum of areas *a*, *b*, and *c*. The marginal utility is represented by area *c*. In other words the total utility is the sum of the utilities of all of the units consumed; the marginal utility is the utility of the last unit consumed.

In Figure I the rectangles are all of the same breadth but of varying heights. Therefore the different utilities and the areas of the different rectangles are to each other as the heights of the rectangles. Thus in Figure II the utility curve mn is drawn to connect the tops of imaginary rectangles

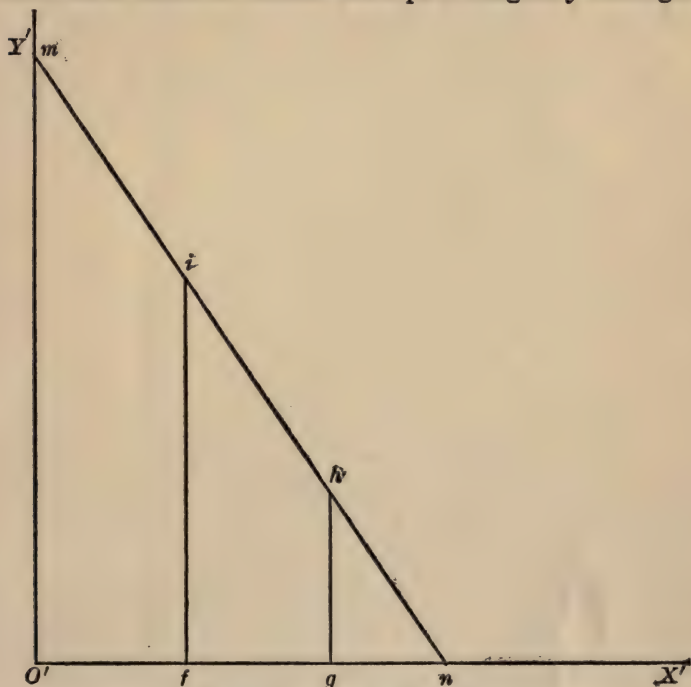


FIGURE II. — Utility Curve.

representing utilities. When the supply of the good is measured by the line $O'f$, the total utility of the supply is represented by the area $O'fim$. When the supply of the good is measured by the line $O'g$ the total utility of the supply is represented by the area $O'ghm$. The total utilities of the two supplies $O'f$ and $O'g$ are to each other as the areas $O'fim$

and $O'ghm$. The marginal utility of $O'f$ is represented by the line fi erected perpendicular to $O'X'$ at f and intersecting the utility curve mn at i . Similarly the marginal utility of supply $O'g$ is represented by the line gh . The marginal utilities of the two supplies $O'f$ and $O'g$ are to each other as fi and gh .

26. The margin of consumption. — Since it is impossible to gratify all of our wants we must from time to time make a choice and decide where we shall increase our expenditures or where curtail them. For most of our wants the choice will not be between complete satisfaction and going entirely without the appropriate good. It will rather be a question of more or less satisfaction of the want. Our choice will seldom be whether we shall starve or have our appetite for food completely satiated, or whether we shall suffer from the cold on account of lack of clothing or wear all of the clothing which we desire. It will rather be a choice as to whether we shall dine at a more expensive restaurant or at a cheaper one; whether we shall purchase a more expensive suit of clothing or a less expensive one. As our money income increases the problem will be where to apply the increase. As it decreases the problem will be where to economize in our expenditures. *The margin of consumption* is the dividing line between the wants that are gratified and those that are left ungratified. This may be illustrated by the following table.

	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>
Utility of first unit	10	9	8	7	6
Utility of second unit	9	8	7	6	5
Utility of third unit	8	7	6	5	4
Utility of fourth unit	7	6	5	4	3
Utility of fifth unit	6	5	4	3	2
Utility of sixth unit	5	4	3	2	1
Utility of seventh unit	4	3	2	1	0

Let a, b, c, d, e , etc., represent the goods which will gratify a certain person's wants, and suppose that the first unit of a, b, c, d, e , etc., which is consumed possesses for that person the relative utilities given in the first line; the second unit, the relative utilities of the second line, etc.

Assuming that the person's want schedule does not vary and that his income remains constant, in the course of time he will, if he acts rationally, work out a system of expenditures which will require only occasional revision, and then only at the margin of consumption. He will find out, for example, if he can just barely afford to consume four units of a , that he should consume three units of b , two of c , one of d , and none at all of e in order to get the most satisfaction out of his income, provided that all of the units cost the same. If now his income is increased so that he may purchase one more unit, it is a matter of indifference to him whether he expends the increase upon a, b, c, d , or e . If, however, a unit of e is only half as expensive as a unit of d he should not purchase a unit of d with his additional income but should purchase two units of e , since these two units will give an amount of satisfaction represented by eleven in our table, whereas a single unit of d gives a satisfaction of only seven.

27. Value in use. — The English word value is derived from the Latin, *valere*, which means to be strong, to have power. It is usual to distinguish between two different kinds of value, value in use and value in exchange. When value is spoken of in economics without any qualification, value in exchange is meant. A treatment of value in exchange belongs in a later chapter, but we shall anticipate that treatment by saying that value in exchange or simply value will be defined as power in exchange, or the power which ownership of a good gives to its owner of securing other goods in exchange for it. We shall here confine our

attention to value in use. In a discussion of value in exchange two persons who are exchangers are to be considered. In a discussion of value in use only one person is considered. Two goods are balanced against each other, not in the minds of two persons, but in the mind of one person. That person chooses one good and rejects the other. He prefers the one to the other. In other words one good has a greater power to influence his choice than the other has. The power of a good to influence a person to prefer it to some other good is its value in use. The man in our illustration in §27 balanced in his mind the gratifications which could be obtained from a fourth unit of good *a*, a third unit of good *b*, a second unit of good *c*, and a first unit of good *d*; and considered that the gratifications were of equal weight. At this margin of indifference of consumption the amount of *a* which would just balance in his mind a unit of *b* was worth to him a unit of *b*. It had the same power to influence him to purchase it that a unit of *b* had.

28. Value in use and marginal utility. — As we have seen, the gratifications obtained from the same amount of expenditures for *a*, *b*, and *c* at the margin of indifference of consumption are the same. Likewise the values in use of the amounts of *a*, *b*, and *c* which can be obtained for a given amount of money are the same. But the marginal utility represents capacity to gratify wants, and the value in use represents a power of influencing the choice of the purchaser. Therefore, they are different kinds of things. But the values in use of these various goods vary as their marginal utilities vary, relatively to the values in use and the marginal utilities of other goods.

In this explanation of value in use we have introduced the idea of the price of goods in the market. This idea will be discussed later in connection with the discussion of value in exchange. But it was necessary to introduce it at this

point because as a matter of fact the value in use of goods to us is influenced by their market price. If goods could be had without cost, marginal utilities and value in use would both sink to zero. If we were considering the case of value in use in the stage of independent household economy where there was no market and no exchange we should need to compare not the amount of various kinds of goods which could be purchased for a given amount of money as we have done here, but the amount of the various kinds of goods which could be secured by a given expenditure of physical and mental effort.

The term value in use was used by Adam Smith and certain other economists following him to mean utility or usefulness. In this sense of the term the value in use of several units of a commodity is dependent upon the total utility of those units and not upon their marginal utility. But the meaning of value in use given above is better present-day usage. We can get an indication of the value in use of a given supply of a commodity by multiplying the marginal utility by the number of units in the supply.

29. Engel's laws. — Various attempts have been made to learn how consumers actually apportion their expenditures in the satisfaction of their different needs. Such a study was made by Le Play, in the early part of the nineteenth century in France. Dr. Engel of Saxony, after examining the data of Le Play and making extensive investigations of his own, laid down the four following propositions :

First, the larger the income of the family the smaller is the percentage of it expended for food.

Second, the percentage of outlay for clothing is approximately the same for large as for small incomes.

Third, the percentage spent for rent and for fuel and lighting is approximately the same whatever the income.

Fourth, the larger the income the larger is the percentage

expended for education, health, recreation, amusements, and so forth.

The following table compiled by Engel shows the percentage of expenditure made for different purposes by families in Saxony with different classes of income.

OBJECT	FAMILY INCOME		
	\$225-\$300	\$450-\$600	\$750-\$1000
Subsistence	62%	55%	50%
Clothing	16%	18%	18%
Lodging	12%	12%	12%
Heating and lighting . .	5%	5%	5%
	95%	90%	85%
Education, religion, etc. .	2%	3.5%	5.5%
Legal protection	1%	2%	3.0%
Care of health	1%	2%	3.0%
Comfort, recreation . .	1%	2.5%	3.5%
	5%	10%	15%

On the basis of a number of studies of family budgets made in this country ¹ Dr. Streightoff would modify Engel's laws to read as follows:

As the income increases:

1. The proportionate expenditure for food
 - (a) decreases for the country at large from 50 per cent to 37 per cent, but
 - (b) in New York City, it amounts to almost 45 per cent of the total outlay until an income of \$1000 is attained.
2. There is a strong tendency for the percentage of expenditure for clothing to increase.
3. Relative expenditures for housing
 - (a) remain about constant for the country at large,

¹Streightoff, *The Standard of Living*, p. 20.

falling very slightly after \$400 incomes have been reached, but

(b) decrease rapidly from 30 per cent, or more, to 16 per cent in New York City.

4. Proportionate expenditures for fuel and light decrease.

5. Expenditure for culture wants increases absolutely and relatively.

The following table,¹ showing distribution of expenditures in workingmen's families in Massachusetts, will serve to illustrate Dr. Streightoff's findings, although they are not in conformity with them in all details.

OBJECT	PERCENTAGE OF THE EXPENDITURE FOR FAMILY WITH INCOME OF				
	Less than \$450	\$450 to \$600	\$600 to \$750	\$750 to \$1200	Above \$1200
Subsistence	56.	54.89	53.30	53.18	54.87
Rent	21.96	17.54	17.27	11.03	6.80
Clothing	9.15	11.69	11.68	14.66	14.62
Fuel and lighting . . .	7.91	6.75	6.75	5.39	4.49
	95.02	91.03	89.00	84.26	80.78
Education, church, etc.	1.61	2.92	3.99	4.12	4.58
Health, insurance . . .	2.98	4.69	3.98	5.06	6.39
Sundries . . . . .	.39	1.36	3.03	6.56	8.25
	4.98	8.97	11.00	15.74	19.22
Total average expenditure	\$382.49	\$555.53	\$688.87	\$886.50	\$1,252.59

30. The law of demand. — In economics the demand for a good means not simply desire for it, but desire accompanied by the ability to pay the current price for it. In other words demand is *effective desire*. Willingness to pay without ability does not constitute economic demand. The law of demand is closely allied to the law of diminishing utility. It takes account of the fact that other things being equal, marginal

¹ Compare the Thirty-second Report of the Bureau of Statistics of Labor, Massachusetts (1901), pp. 296-97.

utility decreases as the quantity of the good increases. The law states that the demand for a good increases as the price is lowered and decreases as the price is increased, or in other words *the demand varies inversely with the price*. It varies, of course, directly with the strength of the desire for the good and directly with the purchasing power of the buyers.

31. Elasticity of demand. — The demand for a good is said to be elastic if the amount demanded increases much as the price is lowered, and decreases much as the price is raised. On the other hand the demand is relatively inelastic if an increase or decrease in the price affects very little the amount demanded. The demand for salt for table purposes is not affected appreciably by even considerable price changes and this demand may be said to be inelastic. The demand for salt for the purpose of destroying weeds is much more elastic, since the amount used for this purpose would depend greatly upon the price. The demand for sugar for the purpose of canning fruit also is an elastic demand, whereas the demand for it for use in tea and coffee would not be much affected by small changes in price.

Where there is a *joint demand*, that is, where the use of one good is dependent upon the use of another, as in the case of pen and ink, an increase or decrease in the price of one of the commodities is likely to have a smaller influence upon demand than where the demand is a simple one. Similarly, where there is a *composite demand*, that is, where the good is used for several different purposes, the elasticity of the demand is likely to be different from what it would be if the good were used for only one of the several purposes.

32. The principle of substitution. — In the case of *alternative demand*, that is, where a want may be satisfied by any one of two or more commodities, an increase in the price of one commodity may cause a serious falling off in the demand for that commodity and a substitution of another commodity

in its place. Thus a rise in the price of butter causes a decrease in the demand for butter and a corresponding increase in the demand for oleomargarine. Similarly, an increase in the wages of workingmen often results in the substitution of machinery for labor. This bringing in of a less expensive good to take the place of a more expensive one, increasing the demand for the former and diminishing the demand for the latter, is known as the principle of substitution.

33. The satisfaction of future wants. — The boy with the five apples and with the five-apple appetite may not think of to-morrow's need for apples, and in that case he will probably consume all five to-day; or he may think of to-morrow's need but expect that to-morrow will also bring apples to meet the need, and in this case he will not save any of to-day's apples for to-morrow. Or he may think of to-morrow's need for apples and realize that to-morrow will bring no new apples with which to supply the need but his will may be so weak that he cannot forego the pleasure of eating to-day's apples to-day. In that case he will make no provision for to-morrow. If his will is strong, however, he will save some of to-day's apples for to-morrow. Many adults as well as boys lack the ability to foresee to-morrow's needs and the moral power to make provision for them. The story is told of a man whose roof was leaking but who did not repair it because when it rained he could not repair it and when the weather was fair it did not need repairing. This man was lacking either in foresight or in will power, but his case is not typical. Most men foresee future wants and attempt to make some provision for them. As a general thing, however, future wants do not affect us so keenly as present ones. Our need for food to-day we feel as hunger; our need for food next week we do not feel to-day as hunger but as anxiety lest we may be hungry next week. In general, our estimates to-day of the utility of the good which we can have to-day

is greater than our estimate to-day of the utility of an exactly similar good which we cannot have until a year from to-day. We shall find this principle of importance when we come to study the problem of interest.

34. Wealth and income. — If we desire to make a definite statement of the amount of economic well-being which a man possesses we may say that he is worth a hundred thousand dollars. Or we may state the same thing in another way by saying that he has an income of five thousand dollars a year. In the one case we state the amount of wealth he has at a given instant of time; in the other case we state the amount of income which his wealth brings him during a given period of time. We speak of both wealth and income in terms of money, but the real wealth and the real income consist not of money but of the things which may be used to gratify wants. In another sense we may consider income as a flow of gratifications of our wants which comes from the possession of wealth. Thus if we own the house in which we live, the house is our wealth but it is not our income. The flow of utilities that comes to us from the possession of the house is income. Income, in this sense, is a flow of gratifications of wants. In the chapter on Interest we shall discuss the relation between the valuation of the income and the valuation of the wealth from which it flows.

35. Classification of expenditures. — Expenditures may be divided into expenditures for necessities, expenditures for comforts, and expenditures for luxuries. Under the head of necessities are here included all of the things that are essential to efficient production. They do not include merely the things which are necessary to keep one alive. These necessities for efficiency will vary with different persons and different occupations and at different times and places. For example, it might be shown that the workers in a certain place, through ignorance of the best methods

of preparing food for human consumption, expended one fourth more for food than they would do if their practice conformed to the best precepts of the art of cooking. We must, however, take them as they are and not as they might be and include in their necessities the food which with their methods of cookery they find that they must consume if they are to be efficient producers. Again, the idea of necessities depends upon the time. For example, certain kinds of fruit might be considered necessities when they are in season but when they are out of season they might be considered expensive luxuries.

The dividing line between comforts and luxuries is a very loosely defined one. The term comforts may be understood to include things that are not necessities but which under the pressure of public opinion or through habit have come to be looked upon as necessities. This class of things is sometimes spoken of as conventional necessities. Luxuries are those economic goods which do not come within either of the classes of necessities or comforts. Whether or not a good is to be classed as a luxury will often depend as much upon the circumstances of the consumer as upon the character of the good.

36. The justification of luxurious expenditures. — The utmost exertion of the average individual who lives apart from human society will scarcely suffice to secure for him the necessities for efficiency. Therefore when an individual is able to secure not only the necessities but also the comforts and luxuries of life the presumption is that society has aided him in producing them and therefore that society has the right to be consulted regarding their use. Any expenditures for luxuries, therefore, which are positively injurious to society are wrong, just as any expenditures are wrong which injure the individual making them. Such justification as there is for permitting some individuals to enjoy luxurious

consumption while others have to go even without the necessities for existence is to be found in the fact that these luxuries represent the price which society pays to secure the use of the productive power of specially gifted producers. But when an individual secures the luxuries without giving to society a corresponding service for them the luxurious expenditure is unwarranted.

The attempt is sometimes made to justify wasteful expenditures made by wealthy people on the ground that such expenditures are beneficial to the poor. When, for example, extravagant sums are expended upon a fashionable dinner it is sometimes thought to justify the expenditure on the ground that the wealth is not wasted but goes to the benefit of waiters and florists and butchers and bakers and grocers and dressmakers and jewelers who would otherwise be without this employment. The fact is, however, that there are many ways in which the money might be spent more usefully. Even if it were not spent at all by its owner but were allowed to accumulate in a bank it might furnish employment to just as many persons and in more useful ways. For a business man might borrow the purchasing power and through its use give occupation to persons who would produce not a little extravagantly expensive food for a few persons, but much simple food for a large number of persons, with the result that instead of giving a few wealthy persons indigestion through overindulgence in too rich food, many persons would be supplied with wholesome food.

Or suppose that instead of spending the money on the extravagant dinners it were used to beautify a public park. This use of it would also give employment to many workers and at the same time it would ultimately give enjoyment to a great many persons who have already too few enjoyments, instead of being wasted upon persons who are better off without the luxurious expenditure.

QUESTIONS

1. What is meant by the consumption of wealth? Illustrate.
2. Is it possible to satisfy any one of a person's wants? All of a person's wants?
3. What is a good as the term is used in economics? A free good? An economic good?
4. Define utility. As used in economics does the term refer to things which are morally bad as well as to things which are morally good?
5. State and illustrate the law of diminishing utility.
6. As the supply of the good increases does the total utility increase or decrease? The marginal utility?
7. What is meant by the margin of consumption?
8. What is the meaning of value in use? How was this term used by Adam Smith?
9. State Engel's laws. Are these laws borne out by American experience? Explain your answer.
10. What is economic demand? State the law of demand.
11. What is elastic demand? Inelastic demand? Give examples.
12. What is meant by composite demand? By joint demand?
13. How do our estimates to-day of the utility to us of a good which we can have to-day compare with our estimates to-day of the utility to us of a good which we can have a year from to-day?
14. What is meant by necessities for efficiency? By comforts? By luxuries?
15. Are luxurious expenditures justifiable? Explain your answer.

SUPPLEMENTARY READING

- DEVAS, Book I, Chaps. vi.-ix.
JOHNSON, Introductory Economics, Chap. ii.
MARSHALL, Principles, Book III.
SEAGER, Principles, Chap. v.
SELIGMAN, Principles, Chap. xii.
VON WIESER, Natural Value, Chaps. i.-xi.

PRODUCTION

CHAPTER IV

FACTORS IN PRODUCTION — LAND

37. What is meant by the production of wealth. — The production of wealth means the bringing of wealth into existence. It does not mean the creation of matter, for that is beyond the power of finite man. The production of wealth is rather the *creation of utilities*. It is the creation of capacities to gratify wants. Not all creation of utilities, however, is production of wealth. The creation of utilities in free goods is not the production of wealth. Only the creation of utilities in economic goods is production of wealth.

38. Kinds of production. — Utilities may be produced in wealth in four ways: by changes in form, by transportation, by keeping wealth through a period of time, and by changes of ownership. The utilities produced in these different ways are referred to respectively as, *form utilities* (sometimes called material utilities), *place utilities*, *time utilities*, and *possession utilities*. An example of the creation of form utilities is the freezing of ice, where the material appears in a new form. The transportation of the ice from the lake to the heart of the city is an example of production of place utilities. By this transportation the capacity of the ice to gratify wants has been increased many fold. Keeping ice which has been secured in the winter from melting until summer is an example of the production of time utilities. The ice has a greater capacity to gratify wants in the summer than in the winter. Again the selling of the ice to the

ultimate consumer results in further increase in utility, for the reason that his want for the ice is greater than is that of the dealer. Or to take another illustration the transportation of a tree from the forest to the sawmill and to the furniture factory is the creation of place utilities. The fashioning of the chair from the lumber is the creation of form utilities. The keeping of the chair until it is wanted is creating time utilities, and the selling of the chair to the consumer may be considered a creation of possession utilities.

39. Primary factors in the production of wealth. — Man and nature are the two primary factors in production. In the process of creating utilities to gratify man's wants each acts upon the other and with the other. Man acts upon nature, as for example in digging the Panama canal, and brings two countries thousands of miles nearer together, thus making it easier for each to get the products of the other. Nature acts upon man, as for example in acclimating him to a new environment and thus making it possible for him to feel comfortable with a smaller supply of clothing than he at first found necessary. Man and nature work together in production, as for example in the growing of wheat, where nature furnishes not only the material but also the vital forces, but where the wheat would not grow abundantly if man did not take the trouble to sow the seed so that it would be ready to sprout at the proper season, and to till the soil so that the forces of nature could work at their best in the production of the crop.

40. The four factors or agents in production. — When writers on economics are preparing their chapters on the production of wealth they keep in mind the chapters on the distribution of wealth which they are to prepare later and try to secure a conformity of treatment between the two parts. As a result of this search for conformity it has been found convenient to recognize four factors or agents in

production and to make a corresponding fourfold division of income in the field of distribution. Thus, instead of speaking of nature and man as the two factors in production, we speak of *land, labor, capital, and business enterprise* as the four factors, and when we come to study distribution we shall learn to classify the respective shares as *rent, wages, interest, and profits*.

41. What is land? — By land the economists understand not only the firmer portions of the earth's surface but the whole surface, water as well as what is ordinarily called land. Land, as the economist understands it, means also the atmosphere which surrounds the earth as well as the minerals and other useful things found under the surface of the earth. It includes, moreover, not merely the materials which nature furnishes to man but also the chemical and mechanical and vital forces which nature places at man's disposal. It includes the power which resides in the natural waterfalls. It includes the heat from the sun's rays which ripens the grain. In a word, the term land is used to designate nature's contribution to the productive process.

42. Geographical influences in production. — The production of wealth is influenced seriously by the fact that the various materials and forces of nature are not uniformly distributed over the earth's surface. The unequal distribution of heat and cold in place and time gives us the zones and seasons which have marked consequences in the field of production. Then, too, the mountains and the plateaus and the valleys and the rivers and lakes furnish different occupations to different groups of people. The winds and the waterfalls lighten the problems of production for those in a position to take advantage of them. One kind of soil is suitable for one product and another kind for another. Navigable rivers make it easier to develop the

resources of a continent. Good ocean harbors build up prosperous commercial cities. In these and in thousands of other ways physical geography influences production.

43. Categories of land. — Because of the variety of ways in which nature is active in production it will be useful to consider productive land as of several classes: agricultural land, which is used to grow crops; grazing land, upon which flocks and herds feed; forest land, from which timber is obtained; mining land, from which minerals are secured; roadways, which serve as means of communication; city land, the main use of which is to serve as a support for buildings, and so forth; and rivers and lakes and oceans, each of which makes its contribution to man.

44. The cause of extensive cultivation of agricultural land. — The agricultural population of our country is scattered over the continent instead of being confined to one or two of our most fertile states. The total farming population could without difficulty find room to work on the rich soil of the single state of Illinois. And such concentration would in many respects be a decided advantage to the people. If all of the agricultural population of the United States lived in Illinois there would of course be more workers to the acre in that state than there are now; there would, however, be plenty of room for them to move around, and work could readily be found for all of them. But while work could be found for all of them in the fields of Illinois they could not raise as much agricultural produce when concentrated in the single state as they could when scattered over the entire country. Or to say the same thing in another way, agricultural soil is so constituted that the labor of ten men with a reasonable supply of capital cannot produce as much wheat on a hundred acres of land as the same amount of labor and capital can produce on a thousand acres of land. This is the basic fact of the law of diminishing returns.

45. **The law of diminishing returns.** — In the cultivation of a given area of land there is a certain amount of capital and labor which when supplied will produce the greatest amount of produce per unit of capital and labor. When we supply just this amount of capital and labor we say that we have reached the point of diminishing returns in the application of capital and labor to the land. If we apply more capital and labor than the amount which brings us to the point of diminishing returns, there is an increase in the total product of the given area of land, but the increase is not so great relatively as the increase of capital and labor. In other words, while the total product increases, the product per unit of capital and labor diminishes. Likewise, if we apply a smaller amount of capital and labor than that necessary to reach the point of diminishing returns, there is a less than proportionate return on the capital and labor applied. The following table will illustrate the situation. The first column represents the number of units of capital and labor employed in cultivating a tract of one hundred sixty acres. The second column represents the number of bushels produced per acre of land; the third column, the total number of bushels produced on the one hundred sixty acres; and the fourth column, the number of bushels produced per unit of capital and labor applied to the land.

UNITS OF CAPITAL AND LABOR	BUSHEL PER ACRE	TOTAL BUSHEL ON 160 ACRES	BUSHEL PER UNIT OF CAPITAL AND LABOR
5	10	1600	320
6	13	2080	330
7	14	2240	320
8	14 $\frac{3}{4}$	2360	295
9	15 $\frac{1}{12}$	2430	270

In the foregoing table we find that by increasing the application of capital and labor from five to six units we have not only increased the total number of bushels on the given area, but we have also increased the returns per unit of capital and labor. We are here operating under a law of increasing returns. But after we have passed the point of diminishing returns where we apply six units of capital and labor in our illustration and get three hundred thirty bushels per unit expended, we begin to operate under the law of diminishing returns. Each additional unit of capital and labor applied means an addition to the total product but a decrease in the average product per unit of capital and labor. We may summarize the law of diminishing returns as follows: After a certain point has been passed in the application of labor and capital to land, other things being equal, the application of additional units of capital and labor gives less than a proportionate return.

46. "Other things being equal." — In stating the law of diminishing returns the phrase "other things being equal" was used. This is intended to convey the idea that the only changes which were taking place were the ones stated, namely, an increase in the number of units of capital and labor and such other changes as were occasioned by this change. If, however, other things did not remain equal, if, for instance, the quality of the soil was being changed by improved methods of cultivation, while the addition was being made to the supply of capital and labor, we might have passed the point of diminishing returns mentioned above, and still, owing to the improvement of the soil, receive increased returns relatively to the capital and labor expended. Or again the additional capital may be in the form of improved machinery which makes the labor much more effective than it had been heretofore, and in that case the returns may continue to increase proportionately to the

increase in capital and labor. It is sometimes said that improvements in methods of cultivation have overthrown the law of diminishing returns. As the law is generally understood this is not true. Improvements in methods of cultivation have mitigated the rigors of some of the consequences of the law, but the law itself still exists.

47. The margin of cultivation. — In a new country where land is abundant and absolutely free, it would pay just to work it to the point of diminishing returns. If it were of the quality represented in the table above, six units of capital and labor should be applied to a hundred and sixty acres of it to get the best results. But in older countries where land has become scarce and where a rent must be paid for its use better results can be had by applying six units of capital and labor to less than a hundred and sixty acres of the land of our illustration or more than six units should be applied to a hundred and sixty acres. In other words, wherever rent must be paid it is profitable to cultivate land beyond the point of diminishing returns. Where a rent is demanded for the best land there may be other poorer lands to be had for which no rent is charged and which when cultivated just to the point of diminishing returns will give as good results as the better land will give when cultivated below the point of diminishing returns. This poorer land for which no rent is charged and which just barely pays for its cultivation is said to be at the *extensive margin* of cultivation. There may be still poorer land than this which can be had for nothing but which is so poor that it does not pay to cultivate it at all. This is said to be below the margin of cultivation. On the other hand, when we cultivate the better land beyond the point of diminishing returns and just up to the point where an increase in our outlay of capital and labor would not be paid for in increased product we say that we have reached the *intensive margin* in the cultivation of the

land. The extensive margin of cultivation may be thought of as a line separating the land which it pays to cultivate from the land which is so poor or so unfavorably situated that it does not pay to cultivate it. The intensive margin may be thought of as a line separating the capital and labor which it pays to apply to a given piece of land from additional capital and labor which it would not pay to apply to that land.

48. Diminishing returns and urban land. — The law of diminishing returns applies not to agricultural lands alone but to other classes of land as well. A simple hut erected upon a large building lot in the heart of a prosperous city will furnish to its owner a certain amount of income. This income, however, is not sufficient in view of the value of the lot. A substantial one-family dwelling house would be a better investment. But the value of the lot is too great to permit of its use for this purpose. A large apartment house on the lot will give a reasonable interest on the investment in the house and also pay the rent for the land. If the law of diminishing returns did not exist, the owner could go on indefinitely increasing his expenditure for the house with the result that the income from the house would be increased in the same proportion that the capital expended upon the house was increased. We know, however, that as a matter of fact the owner cannot go on increasing indefinitely his expenditure of capital for this purpose upon a given area of land. Ultimately he will reach a point where the returns do not increase so rapidly as the investment increases. He finds that there is a limit to the amount of capital and labor that can be applied profitably to a given area of city building land. Here he is working under the influence of the law of diminishing returns. The same principle will also be found to be at work in the case of other kinds of land such as mineral land, forest land, public highways, etc.

49. Diminishing returns and capital and labor. — The law of diminishing returns applies to capital and labor as well as to land. To illustrate its application to capital, a fixed quantity of capital invested in a manufacturing plant may be considered. If when the plant is undermanned the amount of labor is gradually increased, for a time the product will be increased per unit of labor applied to the capital. But after the point is reached where the plant is fully manned, a further increase in the number of laborers will give less than a proportionate return per laborer employed. This will be true for the reason that the laborers will now be, to a certain extent, in one another's way. There will not be machinery enough to keep all the men occupied, and so one laborer will have to wait for another to finish using the machine which he desires to use. In other words, as the amount of labor is increased the total product will be increased but the product per laborer will be diminished. The law of diminishing returns is at work.

The law of diminishing returns also applies to labor. This will be seen where the number of laborers remains constant and a varying amount of capital and land is used. If a relatively small amount of capital and land is used with a given amount of labor, a certain product will result. If now the amount of land and capital employed is increased and the amount of labor remains constant, the total product as well as the product per unit of capital and land is increased. But if the capital and land employed continues to increase without any change in the amount of labor employed, a point is finally reached where a further increase in the capital and land will give an increased total product but a diminished product per unit of capital and land. Here again we are in the presence of the law of diminishing returns.

QUESTIONS

1. What does producing wealth mean? Can man create matter?
2. Name the four ways in which utilities may be produced. Give examples.
3. What are the two primary factors in production?
4. What four factors in production are commonly spoken of by writers on economics?
5. As the economist uses the term, what is meant by land?
6. Show how production is influenced by the physical geography of a country.
7. Make a classification of the different uses of land from the economic point of view.
8. Why do not all of the agricultural laborers of the country concentrate their labor upon the most fertile soil of the country, leaving all less fertile soil uncultivated?
9. State the law of diminishing returns. Give an illustration.
10. How do improvements in the soil and in methods of cultivation affect the law of diminishing returns?
11. What is meant by the extensive margin of cultivation? By the intensive margin of cultivation?
12. Does the law of diminishing returns apply to city building lots? Illustrate.
13. Does the law of diminishing returns apply to capital and labor as well as to land? Explain.

SUPPLEMENTARY READING

- CARVER, *Distribution of Wealth*, Chap. i.¹
 DEVAS, *Political Economy*, Book I, Chap. i.
 ELY, *Outlines*, Chap. ix.
 JOHNSON, *Introductory Economics*, Chap. vi.
 MARSHALL, *Principles*, Book IV, Chap. ii.-iii.
 SEAGER, *Principles*, Chap. viii.
 SELIGMAN, *Principles*, Chaps. xviii. and xx.
 WALKER, *Political Economy*, Part II., Chap. i.

CHAPTER V

LABOR

50. What is labor? — Goods which possess value are known as wealth. Such goods are sometimes furnished freely by nature, but the fact that they are furnished freely by nature does not make them free goods. They are free goods only when they are at hand in such quantities as to satisfy all desire for them. Meteoric iron which falls from the heavens is furnished by nature without effort on man's part. But the supply is limited in relation to the desire for it and therefore it constitutes wealth. Seaweed, valuable as fertilizer, is in some places washed up on the coast in limited quantities. Such seaweed, where the desire for it exceeds the supply, is valuable even though man has as yet expended no effort upon it. But most of the economic goods, or wealth, with which we are familiar are economic goods because man has coöperated with nature in their production; that is, human exertion has been added to the bounty of nature to produce the goods. Labor is *human exertion applied in the production of wealth*. Human exertion is sometimes pleasurable and sometimes arduous, but whether pleasurable or arduous, if it is directed towards the production of wealth, it is called labor. On the other hand, human exertion directed to some other end, for example, exertion for the sake of the pleasure which it gives to the one undergoing the exertion, as in the case of play, is not labor. The distinction between work and play depends therefore not upon the pleasurable or disagreeable character of the exertion but upon the purpose of the exertion.

51. Labor mental as well as physical. — In assisting nature in the production of wealth man coöperates with head as well as with hand. The effort of mind as well as the effort of muscle is labor in the economic sense. In fact it will be found upon investigation that there is no clear-cut distinction between brain work and hand work. The lowest class of physical labor contains some element of mental effort, while the highest grade of mental labor is not without some accompanying physical effort. Between these two extremes there is a large field of effort where it is impossible to say how much is physical and how much mental.

52. The social *versus* the individual viewpoint in production. — Labor may be employed in the production of wealth with the result that the total of wealth in the world is larger than it would otherwise be. In that case there is production from the social viewpoint as well as from the viewpoint of the individual. On the other hand, labor may be employed in producing wealth for the individual, but with the result that the total wealth in the world is smaller or is not increased because of the production. For example, a lawyer succeeds by the exertion of much effort in having the legal title to property diverted from one person to another without recompense to the earlier owner. Here one individual has benefited at the expense of another. Production in this sense is acquisitive production. This is production only from the standpoint of the individual who is benefited. It is not production from the social viewpoint.

53. The Physiocrats on labor. — A group of economists who flourished in France in the second half of the eighteenth century and who have since been known as Physiocrats held that labor is productive only when employed in the extractive industries, i.e. in agriculture, mining, fishing, etc., where the raw material is taken from nature to be worked

up into wealth. In manufacturing and trade and transportation, on the other hand, according to the Physiocrats, labor is not productive.

54. The Socialists on labor. — The so-called scientific socialists hold that labor not only is productive but that it is the only thing which is economically productive. Capital and land are material means of production, they say, but are not themselves productive. As we shall see later, the socialists use this claim to show that labor should receive the whole of the product of industry.

55. The productivity of labor. — Anything, the presence of which increases, or the absence of which decreases, the amount of wealth produced, may be said to be productive. Labor whether employed in agriculture or manufacturing or trade or transportation does increase the amount of wealth through the creation of form, place, time, and possession utilities, and therefore, labor in all of these lines is productive.

56. Other things productive. — But there are other things than labor which are productive. Without land there can be no production, and, other things being equal, the more land there is the more production there is. A country without capital is a less productive country than a country with capital. A country in which industry is well organized is a more productive country than one where it is poorly organized. Therefore, not only is labor productive in the extractive industries, and in manufacturing, trade, and transportation, but so also are land and capital as well as business organization or enterprise.

57. The labor supply. — The productivity of labor depends upon the manner in which it is combined with the other factors in production, and upon its quantity and quality. The quantity of labor is in general modified by the same influences which modify the quantity of population as a whole. Moreover, any influence which changes

the proportion of laborers in the total population tends to affect the labor supply. For example, legislation which raises the age limit for compulsory education tends to reduce temporarily the labor supply.

The population is also influenced by migration and natural growth. Migration into a country is called immigration and migration from a country emigration. The excess of immigration over emigration represents a tendency to increase the population. The United States throughout its history has constantly had an excess of immigration over emigration. An excess of emigration over immigration represents a tendency to decrease of population, which may, of course, be counteracted by a natural increase of the population at home. All European countries during the past century have had an excess of emigration over immigration but in spite of this loss by migration, and because of the excess of births over deaths, they have with few exceptions been able to maintain or increase their numbers.

The change of population through natural growth depends upon the difference between the number of births and the number of deaths. The number of births annually per thousand of population is called the crude birth rate or simply the birth rate and the number of deaths per thousand population annually is called the death rate. Normally in all civilized countries there is a tendency for both birth rate and death rate to diminish. Where the death rate diminishes more rapidly than the birth rate population tends to increase.

58. Malthus' theory of population. — In 1798 Thomas Robert Malthus, an Anglican clergyman, published his "Essay on the Principle of Population," in which he asserted that the human race was not capable of making any marked progress in a communistic society because of the

tendency of population to increase more rapidly than food supply. To illustrate his view, he made the assumption that a population which increased naturally without being cut down or restricted by vice or misery in any of their forms would double itself at least every twenty-five years. Such a population, while itself increasing in geometrical ratio, could at best increase its food supply only in arithmetical ratio. In other words, Malthus maintained that while the population would, if unrestrained by vice or misery, tend to increase in twenty-five year periods according to the first of the following series, the food supply would at most increase according to the second series.

First Series — Geometrical Progression: 1, 2, 4, 8, 16, 32, 64, 128, 256.

Second Series — Arithmetical Progression: 1, 2, 3, 4, 5, 6, 7, 8, 9.

Or, starting out with a food supply sufficient for a given population, at the end of a period of nine times twenty-five years or two hundred and twenty-five years the population, if unchecked, would be two hundred and fifty-six times as large as at the beginning, whereas the food supply would be at most only nine times as large. Manifestly, such a large population could not subsist on such a small food supply. Therefore, said Malthus, they must have been cut down either by *misery* or by *vice*. This line of reasoning led him to deny "the possible existence of a society, all the members of which should live in ease, happiness and comparative leisure."

In later editions of the Essay Malthus introduced another "check" in addition to misery and vice, namely, *moral restraint*. By moral restraint Malthus meant a deferring of marriage from prudential motives until such a time as the persons being married would be economically able to support the probable number of their offspring, and the

observance of strictly moral conduct during this period of deferred marriage.

59. Criticism of the Malthusian theory. — A great deal of criticism has been directed against the Malthusian theory on the ground that it advocated the practice of vice as a restraint upon the tendency of population to increase more rapidly than food supply. Such criticism is without just foundation. Malthus did not advocate vice for the purpose of restricting population. But he recognized that vice does, as a matter of fact, tend to restrict population.

There are, however, three principal lines of criticism which may justly be urged against Malthus. First, he underestimates the possibilities of increased food supply. There is no ground for making the general assertion that as population increases from two to four, food supply can increase only from two to three. Under the operation of the law of diminishing returns and without changing the area of land cultivated by the given population or changing its methods of cultivation, while the labor supply increases from two to four the product could not increase from two to four, but it might well increase more than from two to three. But Europe during the past century has increased the area from which it draws its food supply and now depends in ever-increasing measure upon the Americas and Australia for subsistence. Moreover, the methods of cultivation of the soil have improved marvelously within the last century. The population of England and Wales increased in the century following the publication of Malthus' essay from nine millions to thirty-two and a half millions, and this increase in population took place in the presence of an increasing standard of living.

Second, there are other checks upon increase of population besides vice, misery, and moral restraint as defined by Malthus. The desire of parents to keep their daughters

with them as long as possible serves in some cases to defer marriages. So, too, do customs which demand that the parents furnish a dowry. The feminist movement, the modern tendency to keep children longer in school, and compulsory military service, all act in the same direction. Many other checks might be enumerated which do not fall under Malthus' classification of vice, misery, and moral restraint.

3. Third, along with increase in numbers there is growth in national military and political strength. This sometimes makes it possible for a country to exploit its weaker neighbors in an economic sense, or to resist economic exploitation on the part of stronger neighbors. To this extent an increase in population tends to improve the food supply.

60. **The quality of labor.** — In the production of wealth the efficiency of the laborers is of as much importance as their numbers. For efficient labor the health and strength of the laborer are of primary importance, although their relative importance as compared with other qualities of the laborer varies from occupation to occupation. The health and strength of the workers depend in turn⁽¹⁾ upon the quality and quantity of their food,⁽²⁾ upon their clothing and housing,⁽³⁾ upon sanitary conditions in the occupation, recreation, etc. Other qualities, such as⁽⁴⁾ physical and mental quickness, thoroughness and exactness, the power of endurance, and artistic talent, tend towards efficient workmanship.⁽⁵⁾ The education of the workers, whether in the direction of liberal studies or in the form of technical training for the particular occupation, adds much to their efficiency in production.

(6) Finally, the capacity of the individual worker to coöperate with other workers is of great importance. This latter point will be treated more fully in the discussion of the division of labor.

QUESTIONS

1. Define labor. Is labor always disagreeable?
2. Is labor always predominantly physical rather than mental? Illustrate.
3. Show that what is production from the individual point of view is not always production from the social point of view.
4. Who were the Physiocrats? According to their view, when is labor productive?
5. What is the theory of the socialists with respect to the productivity of labor?
6. Is labor productive? Is labor alone productive?
7. What forces tend to influence the labor supply?
8. State Malthus' theory of population.
9. Criticize the Malthusian theory.
10. What qualities in the laborers tend to make their labor productive?

SUPPLEMENTARY READING

- DEVAS, *Political Economy*, Book I., Chap. ii.
MARSHALL, *Principles*, Book IV., Chaps. iv.-vi.
SEAGER, *Principles*, Chap. ix.
SELIGMAN, *Principles*, Chaps. iv. and xix.
TAUSSIG, *Principles of Economics*, Chaps. i. and ii.

CHAPTER VI

CAPITAL

61. Two meanings of capital. — The term capital is used in a number of different senses, two of which we shall take note of here. Capital originally meant money which was loaned and from which interest was received. But since interest might be received for other forms of wealth than money, the term gradually expanded to include all loans of wealth. Finally economists came to think of capital as wealth from which an income was received whether it was loaned or not. We shall speak of capital in this sense, that is, wealth from which an income is received, as *acquisitive capital*. Since interest is often paid for the use of wealth which is not used productively, acquisitive capital is not always productive capital.

In a second sense the term capital is used to designate goods which have been themselves produced and which are to be used in the further production of wealth. Capital in this sense is *productive capital*. When we are thinking of capital from the point of view of the nation, or of society as a whole, we usually have in mind productive capital. Productive capital, therefore, is social capital, since its productivity represents a net gain to society, and acquisitive capital is usually thought of as the individual's capital because the gain to one individual may mean a loss to another, leaving no net gain to society.

Productive capital includes many things which are not included in acquisitive capital, and acquisitive capital in-

cludes many things which are not included in productive capital. Thus, if the nation digs a great canal and throws it open to the use of the world on equal terms, and if this canal saves hundreds or thousands of miles in the transportation of commodities, the nation has created productive capital. But it has not created acquisitive capital, for the reason that no individual is able to get an income from its control. On the other hand, if a private individual claims and establishes the right to charge a toll on all vessels passing a certain point in a river, his right to collect toll is for him capital, *i.e.* acquisitive capital, but it is not productive capital. It produces an income for him, but it does not produce income for the nation as a whole. Here are an example of productive capital which is not acquisitive capital and an example of acquisitive capital which is not productive capital. As we proceed, however, we shall find that the great mass of productive capital is also acquisitive capital. In the present chapter on production we shall consider capital mainly as productive capital. In the later chapters on distribution we shall be concerned with capital as acquisitive capital.

62. Roundabout methods of production. — Nature and man are the primary factors in production. The tremendous forces of nature are as ready to destroy as to create the material forms which man desires. Man's part in the productive process is to so use his puny strength in directing the mighty forces of nature that the results will be desirable rather than harmful. Man has the choice of using his feeble strength directly and immediately upon the natural forces, or he may apply it indirectly through a long series of processes to accomplish the same end. It is the choice between moving a large stone with his hands alone and moving it with a crowbar. In one case he accomplishes little with a mighty effort; in the other case the stone moves readily in re-

sponse to a lighter force applied through a longer period of time.

This is sometimes illustrated by the case of the peasant who lived in a hut some distance from a spring. In order to quench his thirst he made many trips a day to the spring, but in the course of time it occurred to him to make a bucket in which to carry water to the house. Accordingly he cut down a tree and hollowed out a section of it and fashioned a bucket. Then by going to the spring once a day he was able to satisfy his need for water. He secured water, not by the direct process of going for it whenever he wanted it, but by the *roundabout process* of making a bucket which would hold a day's supply of water. During the time that he was making the bucket he expended much time upon it, but in the days and weeks that followed he more than saved the time thus spent, because he saved several journeys to the spring each day. Soon, however, he discovers a way to save even the time required to go to the spring with his bucket. Then he hollows out logs and places them end to end so that they convey a stream of water from the spring to his house. When he has finished this task he has a constant supply of water at the house without being under the necessity of going to the spring at all. This is a much more roundabout process of securing the water than was the bucket method. It costs him much more time and effort to install it but when it is in operation it proves to be still more economical.

Roundabout methods of production are capitalistic methods, and the things that are produced in the roundabout process not for their own sakes, but in order to aid in the production of other things to satisfy man's wants, are capital. The bucket and the wooden trough and the instruments that had to be made before these could be constructed were capital. They were productive capital in the social sense.

Capital in this sense has been defined as "the complex of intermediate products which appear on the several stages of the roundabout journey." A simpler definition of productive capital is *goods which have been produced and which are intended to be used in further production.*

63. Land is not capital. — Land is often referred to as capital and in many respects it is very much like acquisitive capital as we have defined it. But because land is limited in quantity as compared with capital, and because it has certain social and economic functions to perform in a special way, it seems best to reserve it for a special treatment and to distinguish between land and acquisitive capital. Land is not productive capital as we have defined that term because land is not the result of economic production.¹

64. Capital and capital goods. — A manufacturer who has fifty thousand dollars in cash uses a part of it to purchase machinery, a part to buy raw materials, and a part to pay rent and wages, etc., until he has left in cash only as much as is necessary to pay small accounts from day to day. We say that his capital was fifty thousand dollars when he had it in the form of money. It is still fifty thousand dollars when only a small portion is money. From week to week the raw material is worked up into finished products and sold. From month to month machines wear out or break down and are replaced by new ones. At the end of the year the manufacturer has still a capital of fifty thousand dollars. But he has not the same raw materials and possibly he has not the same machines. The concrete things that went to make up his capital are undergoing change but we say that he has still the same amount of capital, or, making

¹ It may be objected that some land is the result of production, as, for example, where a lake is filled or a swamp reclaimed, but these are the exceptional cases and they are not of sufficient importance to call for a change in our definition.

use of an ellipsis, we say that he has the same capital. When we wish to distinguish between capital in this sense and the concrete things which go to make up the capital, we refer to the latter as *capital goods*.

65. Fixed and circulating capital. — In the example given in the preceding paragraph the machines which contribute their uses over a considerable period of time are called *fixed* capital goods, and the raw material which is used up at once and reappears in another form in the product is called *circulating* capital goods. The terms fixed capital and circulating capital are also used. The difference between fixed capital and circulating capital is one of degree rather than of kind, since both are consumed and the only difference is that one is consumed more rapidly than the other. A machine or a tool which is worn out in a month or two is circulating capital as compared with a factory building which lasts for half a century. On the other hand, as compared with coal, which is used up in a single application, the machine is relatively fixed capital.

66. Free capital and specialized capital. — From the point of view of durability capital is distinguished as fixed and circulating. From the point of view of mobility or readiness to be changed from one use to another, it is distinguished as *free* and *specialized*. If, for example, capital goods can be readily changed from one use to another we designate them free capital. On the other hand, if capital goods must be used for a particular purpose and cannot be diverted to another use without serious loss, we say that the capital goods are specialized. As an example of free capital goods we may cite coal, which can be used in many different kinds of production, and if it becomes necessary to stop one kind of production for which the coal has been purchased, it can readily be used in some other kind of production without loss. On the other hand, capital invested in a creamery

building cannot readily be turned to another use if the production of butter at that place be discontinued. Such capital is specialized capital.

67. How productive capital grows. — In popular phraseology, people save money and thus capital comes into existence. This does not mean that in order to increase the amount of productive capital in a country the amount of money must be increased. The capital may be increased without any change in the amount of money. What really happens is this: A who receives money, instead of spending it to gratify his wants, *i.e.* instead of spending it on consumption goods, puts it in the bank where possibly it draws interest. B who desires capital and has sufficient credit at the bank borrows this money, or its equivalent in purchasing power, and with it buys machinery or buildings which are already in existence or which are to be made. Because A did not buy consumption goods and B did buy machinery, productive effort has been diverted from the production of consumption goods to the production of machinery. In this way capital is produced. This production of capital involves abstaining from consumption and investing. Of course, in our illustration A himself might equally as well have invested the money in the machinery if he had been so inclined, and the result would be the same so far as the saving of capital was concerned.

QUESTIONS

1. Distinguish between acquisitive capital and productive capital.
2. What is meant by saying that capitalistic methods of production are roundabout methods of production? Illustrate.
3. Define capital. Is land capital? Why?
4. What distinction is sometimes made between capital and capital goods?
5. What is fixed capital? Circulating capital? Give examples of each.

6. What is free capital? Specialized? Give examples.
7. Show how productive capital comes into existence.

SUPPLEMENTARY READING

BÖHM-BAWERK, Positive Theory of Capital, Chaps. i. and ii.
JOHNSON, Introductory Economics, Chap. xi.
MARSHALL, Principles, Book IV., Chap. vii.
SEAGER, Principles, Chap. ix.
SELIGMAN, Principles, Chap. xxi.
TAUSSIG, Principles, Chap. v.

CHAPTER VII

INDUSTRIAL ORGANIZATION—DIVISION OF LABOR

68. Industrial organization. — We have already discussed land, labor, and capital as separate factors in production, but we have yet to speak of these factors combined in a co-operative effort to get the best results from all. This is the problem of industrial organization. In this chapter we shall consider the particular phase of industrial organization which is known as division of labor. The next chapter will be devoted to the broader problem of the manner of grouping together all of the factors in production.

69. Labor specialization. — From the point of view of organizing the workers for their work we may distinguish three stages in the movement towards specialization of effort. In the first stage the workers were independent of each other. Each family produced practically all of the things it needed. Each man was a farmer, and a blacksmith, and a carpenter, and a shoemaker. He did all of these things and more, but perhaps he did none of them well. This was the price he paid for his economic independence. We may designate this stage as that of *union of labor*,¹ since there were various kinds of labor performed by one laborer.

In the second stage it was found that there were a few or many tasks that could not be performed satisfactorily by the individual worker. In order to get them done he was

¹ This term has no reference to labor unions. The latter are organizations of employees formed primarily for the purpose of advancing the interests of their members, as opposed to the interests of the employers.

obliged to surrender some of his economic independence, and to secure the assistance of fellow workers. For example, a barn was to be built and heavy timbers were to be used in its construction. One man could not lift the timbers; and so the neighbors were called in and five men easily did in one day what one man could not have done in a month. We shall designate this stage on the road to division of labor as *labor in common*. Another example of labor in common is the old-fashioned husking bee, where the neighbors got together to help first one neighbor and then another. Here the demand for the coöperation did not come, as in the barn building, from a lack of physical strength to do a piece of work independently, but rather through a lack of moral strength sufficient to keep each worker working at his best at his individual task. The next stage in labor specialization was the division of labor.

70. Division of labor. — By a *division of labor* we mean the transferring of work which has formerly been done by one person to several persons in such a way that each of these performs only a separate part of the previous total labor. There are several different kinds of division of labor which may be illustrated as follows. In the first place, where formerly one man farmed and made shoes and built houses and worked in iron, later four men performed these tasks for the community. This kind of division of labor we shall call the *formation of trades*.

In the second place, to take a classic example, where one man formerly made pins, in the time of Adam Smith this work was divided up among several men. "One man draws out the wire; another straightens it; a third cuts it; a fourth points it; a fifth grinds it at the top for receiving the head; to make the head requires two or three distinct operations," etc. This we shall call the *subdivision of labor*.

A third kind of division of labor is represented by the

division of production. Originally the farmer raised the wheat, ground it into flour, and made it into bread. Now the one product, the bread, is not only worked upon but also owned by three different classes of workers in the various stages of its production. The farmer sells the wheat to the miller, who grinds it and sells the flour to the baker, who makes bread of it. This differs from the pin illustration in that during the manufacture of the pin there was no change in ownership.

A fourth kind of division of labor which we shall call *division of trades* is illustrated where in a trade there are several distinct articles made, and where each of these articles comes to be made by special workers who thus develop separate trades. Thus the blacksmiths in olden times made shoes and nails and nailed the shoes to the horses' feet, besides doing other things which the blacksmith no longer does. To-day there is the special trade of horse-shoeing. The horseshoer fastens the shoe to the foot, but the shoe and the nails are made by two other distinct trades.

As a fifth kind of division of labor we may instance the *displacement of labor* by machinery. Former direct processes have become roundabout processes with the result that what was formerly a single task is now divided up into several distinct tasks. For example, with the advent of the sewing machine a part of the work of the seamstress which was formerly done by hand is now done by the seamstress working with hand and foot, while a new group of producers, namely, the makers of sewing machines, now work at tasks which have taken the place of much of the former work of the seamstress.

71. "Practice makes perfect." — The narrower the range of operations performed by the individual worker, the greater is the dexterity acquired in their performance. Practice makes perfect. Where a few simple operations are performed

over and over again, day in and day out, year in and year out, they become almost automatic. The hand and the eye become so accustomed to them that they are performed without conscious effort. Moreover, the oftener the single operation is performed the greater is the tendency to eliminate false motions and to perform the operation in the simplest way. This increased quickness of hand and the saving of motions that accompany specialization result in making divided labor much more productive than undivided labor.

72. Division of labor favors the introduction of machinery.

— As soon as a complicated process of making an article by hand has been broken up into several simple processes, and each simple process has been assigned to a separate worker, the workers soon learn to standardize their movements. They learn the way to hold the material and the tool to reach the best results. When this has been learned the introduction of a machine to do the work is usually not far distant. For as soon as any manufacturing operation can be reduced to uniformity so that exactly the same action is performed over and over again a great many times in exactly the same way, a machine is likely soon to be found to do the work. With the introduction of the machine the effectiveness of the labor employed is often multiplied many hundred-fold.

73. Division of labor and the market. — Where trade is not developed division of labor is likely to proceed slowly because there is not sufficient demand for the increased product which comes with division of labor. An increasing division of labor, however, tends to develop trade by making it advantageous for different persons to devote their effort to special lines. On the other hand, a wide market tends to develop division of labor because of the demand for a large production. In the same way the demand furnished

by a large market tends to promote the introduction of machinery, and in turn the lower costs of machine-made goods tend to widen the market.

74. The principle of interchangeable parts. — In the manufacture of the parts of the machine itself the principle of the division of labor has an important application. Where the parts of a machine are made by hand they are likely to cost more than when they are made by machinery. Moreover, it is likely that similar parts in different machines will not be exactly identical in form and hence will not be interchangeable. On the other hand, where the parts are made by machinery similar parts will be identical in form and when a part has been broken or worn out it will simply be necessary to buy a new machine-made part to replace the old one. This can usually be done at a relatively low cost. Whereas if each part were made according to a separate pattern, a new part would have to be made to order to replace the broken or worn out part. Thus standardizing the parts of a machine and employing the division of labor and machinery in their manufacture cheapens machinery and widely extends its use.

75. Other advantages of division of labor. — In addition to the advantages of the ¹greater dexterity and the ²saving in effort which come from the use of mechanical power, the division of labor has certain other advantages. By dividing the labor and simplifying the operations it is ³possible to employ women and children in many occupations where only men have been employed before the division took place. This increases the productive force of the community. It ⁴is, however, an advantage which is often dearly paid for in the exploitation of the weaker workers. ⁵Another advantage arises from the fact that with the simpler processes a trade can be learned in a few weeks or months where years of apprenticeship were formerly required. Moreover, with the

- diversity of occupations which comes with division of labor
6. it is possible for variously talented persons to find the work for which they are best fitted. For example, it is easier now than formerly for a person who has lost his arms or his legs to find suitable work at which he can earn a living; or for a man who is mentally keen but physically weak to find an opportunity to exploit his abilities. Division of
 7. labor, moreover, permits of territorial specialization. Some countries or parts of a country can produce some of the things needed in the manufacture of an article more advantageously than other countries or sections. A division
 8. of labor permits of the securing of different commodities in places where they can be most advantageously produced.

76. **Disadvantages of division of labor.** — The territorial division of labor is sometimes carried so far that a particular section of the country comes to depend upon a single crop. When this crop fails the section is much worse off than it would be if it had practiced diversified production instead of specialized production. For example, some of our states have depended in the past almost entirely upon a single crop such as wheat or cotton. A failure of that crop or a poor market for it produces hard times for that section of the country. A sufficiently diversified production would not have this disadvantage. Another disadvantage which comes with the division of labor is that the laborer who performs the same monotonous motions over and over again tends to lose his initiative and to become machine-like. To overcome this difficulty it is important that the work day be not too long, and that the worker have ample time for recreation so that he may counteract the depressing influence of his mechanical labor.

77. **Large scale production.** — The division of labor and the introduction of machinery together with the closely related extension of the size of the markets have done much

to increase the size of the typical business unit. Where the size of the market warrants it, goods can, as a general thing, be produced more cheaply on a large scale. A machine can be used only when an operation is to be repeated in exactly the same way a great number of times. With the growth of markets it becomes even more economical to introduce machinery. A large establishment turning out a great number of articles daily can employ machinery in many operations where a small business turning out only a few articles cannot afford to install the machines. In these cases the large establishment will produce the article more cheaply and the small establishment with the higher cost may not be able to remain in the competition. Moreover, in the employment of the labor force, on account of the division of labor, the large establishment can practice many economies in production which are not open to the smaller business. High-grade superintendents may find an outlet for their energies in the large establishment. High-priced experts may be employed. Division of labor among the lower grade workers may be introduced on a larger scale in the larger business unit.

There are economies in the handling of the material which the large business may practice but which are denied to the small business. By-products of various kinds which would be thrown away by the small business may be utilized in the large business. In the purchase of materials, the large business is often able to buy cheaper than the small business. In the selling of the product other economies are possible. Advertising represents such a possibility, as does also the fact that the selling force may be more economically utilized where the volume of sales is large. The possibility of experimenting with new methods and devices is open to the large business where their employment would be impracticable for the small business. From these considerations

it follows that in many lines of enterprise the small business is driven out of the competition with the large business and the larger business unit remains the type for the enterprise.

78. Small scale business. — The advantages of large scale production are seen at their best in the manufacturing field. In agriculture, on the other hand, these advantages are at a minimum. This is due to the fact that the division of labor is more elaborate in manufacturing industries than in farming. In fact, one might speak of union of labor as more characteristic of farm work than division of labor. On the farm, on account of changes in seasons and weather, it is impossible to keep each man doing a particular kind of work all the time, and in the course of the day it may be necessary to change from one occupation to another. In the factory, where the worker is performing one task over and over again all day, it is easy to check up his work and to see that he does not waste time, whereas on the farm, where the tasks are varied, oversight over the laborer is difficult. One foreman cannot superintend the work of a large number of men on the farm as he can in a factory. As a general thing in those occupations where oversight over the labor is difficult, small scale operation of business will be preferable to large scale operation.

QUESTIONS

1. What is the problem of industrial organization?
2. Name the three stages in the movement towards labor specialization and show how they differ from each other.
3. Define division of labor and explain the different forms of division of labor.
4. Why is divided labor more productive than undivided labor?
5. How does the division of labor affect the introduction of machinery?
6. What is the relation between the division of labor and the extension of the market?

7. Of what importance is the principle of interchangeable parts in machinery?

8. Name the principal advantages derived from the division of labor. The principal disadvantages.

9. What are the advantages of large scale production? Of small scale production?

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JOHNSON, *Introductory Economics*, Chap. vii.

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TAUSSIG, *Principles*, Chap. iii.

CHAPTER VIII

INDUSTRIAL ORGANIZATION — BUSINESS ENTERPRISE

79. The enterpriser. — The typical business man of two or three centuries ago was the master craftsman who owned the tools which he used with his own hands upon his own material and in his own house. He sold his wares directly to the consumer. Sometimes he employed additional labor and sometimes not. He was laborer, capitalist, landlord, and employer all in one. But under the stress of competition a specialization developed which made it no longer expedient for the business man to exercise all of these functions. The man who specialized in organizing and directing the business came, in time, to have an advantage over the non-specialist. And so a special class of persons developed whose business it was to organize and direct enterprise. Since these persons are said to undertake the business, it was formerly customary to call them "undertakers." In recent times, however, this term has been used to designate a particular class of business managers and it became necessary to find another term so as to avoid ambiguity. The term *entrepreneur*, which is the French equivalent of the English word undertaker, is frequently used for this purpose. Sometimes the word employer is used to designate this person. Recently the word *enterpriser* has been widely used.

80. Functions of the enterpriser. — The business of the enterpriser is to organize and direct the enterprise. He

decides whether or not the business is to be undertaken. He employs the labor and secures capital and land in suitable quantities and proportions. He undertakes to see that these factors produce efficiently. He finds a market for the product. Out of the money return which he receives for the product, he undertakes to pay the laborer and the landlord and the capitalist for their contributions to the production. If there is a balance left after paying all the claims against the business, it goes to the enterpriser as profit. If he is compelled to pay out more in the conduct of the business than he realizes from his sales, the business is conducted at a loss and he must bear the loss. Unless he can, on the whole, conduct the business at a profit he cannot continue indefinitely as enterpriser.

81. Forms of business management. — The responsibility for the successful organization and direction of a business enterprise may rest with one person or it may be divided among several. It will be convenient to classify business management according to forms as single enterpriser businesses, partnerships, corporations, coöperative businesses, and government industries.

82. The single enterpriser. — As a good example of the single enterpriser may be cited the farmer. The typical farmer is more than enterpriser, for he furnishes to the enterprise his own labor and his capital and his land as well as his managing ability. But he is the enterpriser as well, for he decides how the land and labor and capital shall be united in the enterprise. He is responsible for their efficient coöperation and for the marketing of their products. He secures his profits when the factors in production are well organized and directed, and he suffers a loss when the business is poorly managed. Likewise, the lawyer or the shoemaker who works for himself is a single enterpriser, for he directs the business and takes the risks, making profits or

suffering losses. As a general thing the single enterpriser system flourishes where small scale production prevails, as for example in retail trade, in agriculture, in the professions, and in such handicrafts as blacksmithing, tailoring, etc.

83. Advantages and disadvantages. — One of the important advantages of the single enterpriser system is the ease of starting the enterprise. There are no agreements to be made with partners, no stockholders to be secured, and no license fees to be paid for incorporation. The enterpriser decides upon the business and then proceeds to get the capital and labor and land together and to set the enterprise in motion. A second distinct advantage of the single enterprise is that the person who makes the decision secures directly for himself the profits or suffers the losses. Such closeness of relation between direction and responsibility is conducive to efficient management. As disadvantages of the single enterpriser system in comparison with the other forms of enterprise we may cite the fact that the single enterpriser seldom has the breadth of experience and the capacity for conducting the business that are likely to be found among his competitors where the competing businesses are directed by groups of persons. In the second place, it is difficult for the single enterpriser to secure capital as readily as the partnership or the corporation can secure it. And thirdly the single enterpriser is not likely to be so well able to bear the losses which may attend the business as are the other forms of enterprise, while in the corporation form the extent of loss suffered by the enterprisers may be limited.

84. The partnership. — Where two or more persons agree to conduct a business together and to share in the profits or losses, we have the partnership. The partnership is like the single enterpriser and unlike the corporation form of management, which will be discussed later, in that the partners are personally responsible for the losses. Again,

the partnership is not a distinct legal personality as is the corporation. When a claim against the partnership is to be collected in the courts, it is the partners who are sued and not the partnership as such. Moreover, where there is no definite agreement to the contrary, any one of the partners may make an agreement for the partnership which will be binding on all of the partners. Any partner may find himself compelled to sacrifice all of his property to satisfy the debts of the partnership contracted by some other partner. In the partnership the enterpriser function is shared by the partners.

85. Advantages and disadvantages of the partnership. —

The partnership possesses some of the advantages of the single enterpriser scheme. The partnership is easily formed and there is a close connection between the direction of the enterprise and the securing of profits or the suffering of losses. Those who make the decisions stand to lose or gain from them. This connection, however, is not so close as in the case of the single enterpriser, since it may happen that one partner has to suffer for the bad judgment or mismanagement of another. The partnership has an advantage over the single enterpriser plan in that it is possible in this form to bring together the various kinds of abilities essential to the successful conduct of the enterprise. For example, in conducting a small manufacturing establishment two entirely different forms of business management may be found desirable. The kind of ability necessary to the successful conduct of the manufacturing end of the business is entirely distinct from the kind of ability which is essential to the successful marketing of the product. Both kinds of ability can more readily be combined in the partnership where one partner manages the factory and another manages the sales, than in the single enterpriser form where the same man must perform both functions. Another ad-

vantage of the partnership form over the single enterpriser form lies in the fact that the former may secure greater capital by pledging its greater credit due to the unlimited liability of all of the partners, or it may secure additional capital by adding new members to the partnership.

The principal disadvantage of the partnership form is found in the friction and indecision in the management of the business likely to result from the necessity of many men's uniting on a single policy. Moreover, the unlimited liability of the partners, and especially the fact that one partner may risk all of his property on the judgment of another member of the partnership, acts as a deterrent to the usefulness of this form. While the partnership has an advantage over the single enterpriser form in the greater ease with which it can secure capital, it in turn, as we shall see later, is less useful in this respect than the corporation. A further disadvantage of the partnership is to be noted in the fact that the death or insolvency of any one member results in the dissolution of the partnership.

86. The corporation. — In order to secure greater concentration of capital, limited liability of the enterprisers, and greater continuity of policy, the corporation form of management has been widely adopted. In this form of association persons known as stockholders secure a charter from the state which permits them to act as a single person in the eyes of the law. Unlike the partnership, the corporation can sue and be sued as a separate entity, without naming the individual members. The corporation is in effect a legal person.

The capital of the corporation is obtained by the sale of shares of stock of equal value and by the sale of bonds. The shareholders may possess one or more shares of stock, their importance in the corporation as shareholders depending upon the amount of stock which they hold. The share-

holders elect a board of directors to whom they turn over the management of the business. The board of directors in turn choose a president or a manager who manages the business under their general direction and superintendence. We have just said that shares of stock are of equal value. This statement, however, requires qualification. The capital may be divided into two classes of shares of stock, preferred stock and common stock, and while in each class the shares are of equal value, the owners of the shares of preferred stock may possess privileges not possessed by owners of the shares of common stock. This fact usually makes the shares of preferred stock though nominally of the same value as the shares of common stock, actually far more valuable.

The second method of securing capital for the corporation is by the sale of bonds. Bonds are of the nature of a mortgage upon the property of the corporation, issued for a definite period of time and calling for a fixed rate of interest. In both these respects they differ from shares of stock. Since the bond holder does not undertake the risk he is not an enterpriser in the business as is the stockholder.

87. Advantages and disadvantages of the corporation form. — Because of the division of the capital into small shares it is possible for many persons with small amounts of capital to coöperate in bringing together a large amount of capital for a single enterprise. It would be impracticable for these numerous persons to coöperate in a partnership. In the second place, capitalists are often willing to invest their money in an enterprise conducted in the corporate form and with the liability of investors limited to the amount of capital subscribed for, when they would not invest in the same enterprise if it were conducted as a partnership, and with the condition that they might be called upon individually to bear the whole of a possible loss. In the third place, although individual members die or retire from the

business, the corporation continues to exist as a distinct entity. A continuity of policy is thus possible which is not so likely to be found in the partnership form.

1. Among the disadvantages of corporate management may be cited the fact that the officials to whom the stockholders delegate the power of management often act in their own selfish interest, and in opposition to the interest of the stock-
2. holders. Often, too, in the treatment of its employees considerations of humanity which prevail under other forms of business organization are entirely lacking. For the older personal relation between employers and employee there is substituted the cash nexus. Finally, corporations are often
3. found wanting in moral standards, and in their relations with public officials resort to bribery and corruption to secure their ends to an extent that would not be tolerated by the officials of the corporations as individuals.

88. Coöperative management. — Under the plan of coöperative management the attempt is sometimes made to do away with the profits of the enterprisers or rather to secure those profits for the workers by dividing the enterpriser function up among a group of workmen. A number of types of such coöperation are to be found, among which may be enumerated coöperation in wholesale or retail trade, credit coöperation, and “productive” coöperation. Of these the most successful has been coöperation in retail trade.

The typical example of such success is the Rochdale Society of Equitable Pioneers, originally an organization of flannel weavers of Rochdale, England. This society, which was founded in 1844, consisted in the beginning of twenty-eight members with a total capital of twenty-eight pounds. The Rochdale Pioneers undertook at first to supply themselves with flour, butter, sugar, and oatmeal. As the society prospered and its membership grew, the range of its activities

expanded rapidly. During the earlier years of the enterprise its promoters served without pay, but later salaried managers were employed. The management of the Rochdale Pioneers was democratic, each shareholder having only one vote, irrespective of the number of shares that he held. Sales were for cash, and the enterprise thus avoided the bad accounts that competing stores sustained. After all the expenses of the society were paid, a 5 per cent dividend on the capital stock was allotted to shareholders. There was then set aside a further sum for educational purposes, and the remainder was divided among the purchasers whether members or not in proportion to their purchases. The Rochdale society has also undertaken the management of mills and factories as well as the original work of selling to consumers. These mills and factories are, however, run by salaried managers and the workers in them have no voice in the management. They are not coöperatively conducted by their workers. Coöperation in both retail and wholesale trade has developed to a marked degree in Great Britain as well as in a number of continental cities. In this country, too, there are many examples of coöperation in the retail trade, but they have not been so successful as in Europe, partly because of the keener competition of competing concerns and partly because the American workingman has not in the past cared for the small economies practiced by the families of European workingmen.

In Europe, coöperative credit associations also have made marked progress. Among the most important of these are the Schulze-Delitzsch and the Raiffeisen societies of Germany. The first type of these was founded by Schulze in 1849 among thirteen cabinetmakers of Delitzsch, his native town. In the Schulze-Delitzsch association loans were granted to members of the society paying regular monthly contributions. Money for this purpose was bor-

rowed from outside as well as contributed by the members themselves. For the money borrowed from outsiders all of the members of the society became liable. Each member became liable individually. The members of the society were thus able to borrow money because of the strength of their coöperative security at a cheaper rate than they could have secured it individually, or perhaps where they could not have secured it at all from the banks. In the Raiffeisen societies the members are for the most part peasant proprietors. They contribute part of the capital and a part is borrowed, as in the Schulze-Delitzsch societies. Because the money is for agricultural purposes the loans are for longer periods than is the case in the urban societies. Similar coöperative credit associations are to be found in the other countries of Europe as well as in the United States, where the building and loan associations furnish a successful example.

In the two types of coöperation already noted, where we have coöperation of consumers or coöperation of borrowers, the function of the enterpriser is less important than it is in the case where there is coöperation of producers, or productive coöperation. Consequently this latter type of coöperation has been less successful. In coöperative production the workers either advance the capital or secure it on their own credit and divide among themselves the task of managing the business. Productive coöperation has nowhere had the same degree of success as has been accorded the plan of coöperation of consumers and of borrowers. The possibilities of its success are greatest where there are only a few workers employed in the group and where these workers do not represent a great variety of skill and strength, where the outlay for capital is relatively small, and where it is a comparatively easy matter to market the product successfully.

89. Advantages and disadvantages of coöperation. —

A business which is run coöperatively and successfully should enjoy the advantage of running without fear of strikes, since the workers themselves are the enterprisers. A second advantage which the coöperative business enjoys arises from the fact that the satisfied laborers take a lively interest in their work, and there results a greater efficiency in production. But coöperative associations, and especially productive coöperative societies, labor under important disadvantages which have prevented them from achieving a wide success. Where singleness of purpose and promptness of action are required, coöperative production often can supply only divided counsels and dilatory action. Where unique, and, therefore, high-priced expert guidance is required, the coöperators find it difficult to appreciate the importance of that guidance and hence fail to pay sufficiently high rewards to secure it. Moreover, the laborers are not always willing or able to stand the chances of sustaining losses as well as of securing profits, and prefer the certainty of a stipulated wage rather than the uncertainty of receiving profits or bearing losses. This leaves room for an enterpriser distinct from the laborers who is willing to take the chances of the business and to guarantee the workers a certain if moderate income.

90. Government industry. — A final form of business management is that in which the state is the enterpriser. Many forms of business enterprise which were formerly the concern of individual citizens have now been taken over wholly or partly by the state and there are even persons who advocate the extension of government enterprise to include all kinds of business. If the desire of this latter class of persons were carried out, there would be no longer private enterprisers. The state would be the sole enterpriser. As a general proposition, private enterprise can produce more

economically than can the government, and, therefore, private enterprise should be encouraged as much as possible. On the other hand, there are many kinds of enterprise in which cheapness of production is of much less importance than the quality of the product or the service. The supplying of drinking water in a city and the handling of the mails are illustrations. In such businesses government management is preferable to private management.

QUESTIONS

1. What other terms have been used synonymously with enterpriser?
2. What are the functions of the enterpriser?
3. Classify the forms of business management.
4. Give an example of a single enterpriser.
5. Discuss the advantages and disadvantages of this form of management.
6. Explain the partnership form of management.
7. Discuss the advantages and disadvantages of this form.
8. Explain the corporation form.
9. Discuss the advantages and disadvantages of the corporation as compared with other forms of management.
10. Give examples of coöperative management.
11. Discuss the advantages and disadvantages of coöperation as a form of business management.
12. As a general principle, under what circumstances is government management of industry to be preferred?

SUPPLEMENTARY READING

ELY, *Outlines*, Chap. ix.

MARSHALL, *Principles*, Book IV., Chaps. x.-xii.

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SELIGMAN, *Principles*, Chap. xxii.

TAUSSIG, *Principles*, Chap. vi.

EXCHANGE

CHAPTER IX

DEMAND AND SUPPLY. VALUE AND PRICE

91. Exchange as a division of economics. — Under the head of consumption of wealth were discussed wants and the means of gratifying them. The theme of consumption in economics is the explanation of *demand*. In the chapters on production which followed, the problem of *supply* held the center of interest. The present chapter on exchange is concerned with the balancing of supply and demand in the market. It is concerned with value and its related problems, such as money and credit and banking.

92. The meaning of exchange. — An exchange is a transfer of goods from one party to another and a corresponding transfer of goods from the second to the first, each transfer being made in consideration of the other. It is a two-sided transfer of goods. In this respect it differs from a gift, which is a one-sided transfer of goods.

93. The advantages of exchange. — As we have already learned, in the case of the independent household economy there was no exchange. The family produced what it consumed. The same man was farmer, and tailor, and shoemaker, and blacksmith, and miller. While he did many things, he did none of them exceptionally well. Later we find that division of labor has been introduced and that one man is a farmer, another a shoemaker, another a tailor, and so on. Each now does only one thing, but he does that thing well. The farmer can now get more and better shoes, clothes, and bread, by exchanging for them the products of his farm,

than he was able to get when he produced all of them himself. Each of the others finds the same thing true. He is better off when he produces one thing and exchanges it for many things than when he produces everything for himself and lives without exchange. When the tailor exchanges his product for that of the shoemaker he does so in order to benefit by the transaction. But the benefit which he receives is not an injury to the shoemaker; for the shoemaker, too, has made the exchange because he expects to profit by it. Each of the two gets more than he gives. The explanation of this is to be found in the fact that possession utilities have been created by the exchange. The product which each gives in exchange is worth more to the other than it is to the one who has produced it.

94. Value and price defined. — Value is a power of attraction in a good which leads men to choose it in preference to other goods. A good has such power only when its supply is limited relatively to the demand for it. Value is of two kinds, value in use and value in exchange. Value in use was discussed in an earlier chapter. *Value in exchange* may be defined as the power which ownership of a good gives to its owner of securing other goods in exchange for it. Or more briefly, it is *power in exchange*. Value in use and value in exchange are simply two different phases of the same thing. When the term value is used in economics without qualification, value in exchange is usually understood.

In an exchange of goods the quantity of another good that must be given for a particular good is the *price* of the latter. Since the prevailing form of exchange is that of goods for money, the price of a good has come to mean the amount of money for which it will exchange.

95. The relation between value in use and value in exchange. — At first thought it may seem strange that value in use and value in exchange are the same thing looked at from

two different points of view. We are accustomed to think of value in use as varying with the individual estimates of various persons and value in exchange as something which is the same for all persons at a given time and in a given place. The explanation is very simple. If individuals did not exchange goods and if each produced all of the things that he needed, each good would have a different value in use for every individual. Whenever a good becomes of comparatively little importance to an individual as compared with other goods, and with the estimate which other persons make of this good, a portion of it will be exchanged for some of the other good which has the relatively higher value in use. After a man has parted with a portion of his supply of the first good each unit of the remainder of that good has for him a greater value in use than before the exchange was made, owing to its greater scarcity. But after the exchange each unit of the second good has for him a smaller value in use than before, because of the greater quantity of it in his possession. He has increased the marginal utility of the first good and diminished the marginal utility of the second good. He will continue this process of increasing the marginal utility to him of one good and diminishing that of the other by decreasing his supply of the one and increasing his supply of the other until the marginal utilities reach a state of equilibrium, that is, until the utility to him of the amount of the first good which can be purchased for a given sum of money is equivalent to the utility to him of the amount of the second good which can be purchased for the same sum of money. When this condition of balance is reached a dollar's worth of the first good has for him the same value in use as a dollar's worth of the second good. Thus, values in use tend to approximate values in exchange.

96. Value and weight compared. — A comparison of value with weight will aid in arriving at a clearer understanding of

the nature of the former. The weight of a body is the force which draws it to the earth. The value of an object is a certain power of attraction which it has for human beings. The only way we have of measuring this value or power of attraction in goods is to compare it with or to oppose it to some other value or power of attraction. This is done when a person chooses between two goods, accepting the one and rejecting the other. The one which he keeps has more value than the other. We have a similar experience with weight. We learn the amount of the weight of a body by comparing the attraction of the earth for the body with the similar attraction which the earth has for some other body. The comparison is made by means of a balance. In order that we may express the amount of weight in an object it is necessary that we have a unit weight, such as the pound. A pound is a certain definite quantity of something which has weight. Although a pound is the same all over the world, the weight of a pound differs in different latitudes. In a similar way, the dollar is a certain amount of the good, gold, which has value. The value of the dollar is compared with other values, and in this way we are able to speak of the number of units of value which a good contains. And although the amount of gold which constitutes a dollar remains constant, the value of a dollar is continually varying.

97. No intrinsic value. — When we say that an article possesses value we do not mean that it possesses it in the sense that value would remain with it if the article were taken out of relation to human beings. The utility of a good or its capacity to gratify wants depends, as we know, not only upon the qualities of the article, but also upon the person whose desires are to be gratified. Now value depends upon utility. It depends upon a relation between the article and the person who has the desire for it. It also depends upon the whole supply and not upon the one unit of the good alone.

Value, therefore, is not something purely objective residing in the article, but it is subjective-objective. It depends upon the subjective desire of one or more persons and upon the objective qualities in the good.

98. The meaning of a market. — In many of our cities when the housewife takes her basket in the morning and says that she is going to market, we understand her to mean that she is going to a public square where there is a large open building in which a number of regular dealers rent small booths, and in front of which there is a long row of farmers' wagons containing farm produce for sale. We think of the market as a place where a number of sellers of produce of various kinds meet purchasers of their wares. In an earlier day it was usual in all towns to have such public markets, but because of changes in means of communication and transportation the term market, as generally understood, has ceased to denote a particular place.

The word market has come to mean a number of buyers and sellers of a commodity whether they all ever get to the same place or not. Some goods can be graded and described in such a way that it is not necessary for the purchaser to see them. He can judge by the description. In the case of such goods it is not at all necessary for the buyer and seller to meet. The purchase may be made by mail, or telegraph, or telephone. Hence the market has ceased to be for these commodities a narrowly circumscribed geographical area. All of the buyers and all of the sellers throughout a whole country, or throughout several countries, may constitute a market in this sense. This would be true of the wheat market, or the cotton market, or the market for well-known stocks and bonds.

The value of the commodity might vary in different parts of the country, owing to difficulties of transportation, or for certain other reasons, but the value in one part of the country would have an influence on the value in another part of

the country. In the case of many other kinds of goods the market may be narrower geographically, but to-day we think of the persons who buy and sell a commodity, whether they are near together or scattered, as the market, rather than the place where they happen to get together to buy and sell.

99. Demand and supply. — Value depends upon the relation between demand and supply. As we have already seen, demand varies inversely with the price; that is, as the price increases the demand decreases. When the price is very high comparatively little of the article will be demanded. As the price falls, more of the good will be demanded until at a very low price a considerable quantity of the good will find buyers willing to pay the price. But we might know all about the demand for a good in a market and yet not know what the value would be likely to be. In order to make a correct forecast of the value it is necessary to know not only the conditions of demand but also the conditions of supply. The value of a commodity will be fixed at the point where the amount offered just equals the amount demanded.

100. The demand schedule. — The demand schedule for a good in a market, that is, the statement of the varying amounts of the good which will be demanded at different prices, is a combination of the individual demand schedules of the different purchasers in that market. The individual's demand schedule for a good varies with the utility of the good for him and with his purchasing power. The greater the utility of the good to the individual, other things being equal, the more he will be willing to pay for the good; and also the more money he has with which to buy the good, other things being equal, the more he will be willing to pay for it. Assuming that the three individuals, A, B, and C, have individual demand schedules for good x as represented in the first three columns below, their combined demand schedule is represented in the fourth column. In a similar

way we can think of the total demand for a good in a market as being a combination of all of the individual demand schedules.

MAXIMUM PRICES WHICH A, B, AND C WOULD PAY IF NECESSARY FOR VARYING AMOUNTS OF THE GOOD *X*, TOGETHER WITH THEIR COMBINED DEMAND SCHEDULE¹

	A	B	C	A, B, AND C TOGETHER
would pay if necessary for 1 unit of good <i>x</i> . . . . .	.70	1.30	1.50	1.50
each of 2 units of good <i>x</i> . . . . .	.60	1.20	1.40	1.40
each of 3 units of good <i>x</i> . . . . .	.50	1.00	1.10	1.30
each of 4 units of good <i>x</i> . . . . .	.40	.80	.90	1.20
each of 5 units of good <i>x</i>				1.10
each of 6 units of good <i>x</i>				1.00
each of 7 units of good <i>x</i> . . . . .				.90
each of 8 units of good <i>x</i> . . . . .				.80
each of 9 units of good <i>x</i> . . . . .				.70
each of 10 units of good <i>x</i> . . . . .				.60
each of 11 units of good <i>x</i> . . . . .				.50
each of 12 units of good <i>x</i> . . . . .				.40

If A, B, and C are the only purchasers in this market for the good *x*, it will readily be seen from the individual schedules under A and B and C that the price which can be secured for one unit of the good *x* if offered in the market is one dollar and fifty cents. This is the outside limit of what C would pay for it. If two units of the good were offered for sale, the maximum price which can be secured is one dollar and forty cents and C will pay this price if it is necessary to pay so much to secure them. If three units of the good are offered in the market, the price per unit will be one dollar and thirty cents and C will secure two and B will take one. If four units of the good *x* are offered for sale, the highest price

¹ The table assumes a more regular falling off in demand than is likely to be met with in an actual market.

per unit will be one dollar and twenty cents. At this price C will take two units and B will take two units. When five units are offered for sale the maximum price will be one dollar and ten cents. At this price C will purchase three and B will purchase two units, and so forth.

101. The demand curve. — The demand schedule in the preceding paragraph may be graphically represented by the following demand curve.

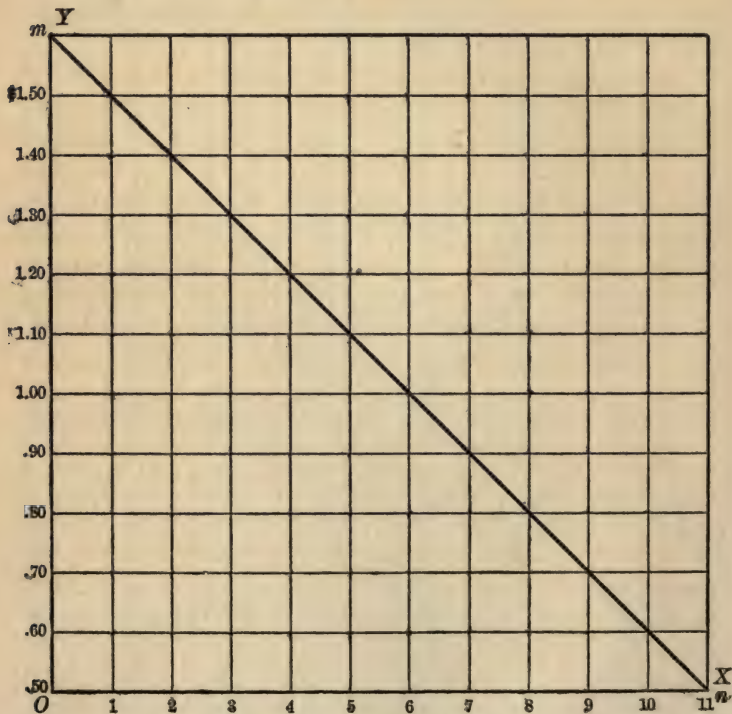


FIGURE III. — Demand Curve.

In the above figure the quantity of the good x is measured along the line OX . The maximum prices which purchasers

are willing to pay if necessary in order to secure the good under different conditions of supply are represented by lines parallel to OY . The curve mn connecting the upper ends of the parallel lines is the demand curve. Perpendiculars to OX cut by this curved line represent the price which will be paid for a unit of the given commodity in the assumed market under different conditions of supply and under competitive conditions. Thus, there will be a demand for one unit at price \$1.50; for two units at price \$1.40; for three units at price \$1.30, etc.

102. The conditions of supply. — As a general rule the cost of producing a unit of a good depends upon the number of units that are to be produced. While a person's demand for a good depends upon the utility of the good to him and his purchasing power, the supply of a good in a market depends, as a general thing, upon its cost of production. The money cost of producing goods depends in the last analysis upon the utility of the goods and the amount of purchasing power in the community. In this elementary treatise, however, it will not be necessary to make this ultimate analysis of cost. For our present purpose we need to consider only the cost of individual goods and not the question of the general level of costs.

Some goods are produced under such conditions that the larger the number produced the greater will be the cost of production per unit. In the production of other goods the cost per unit is practically the same no matter how many goods are produced and in the case of still other goods the greater the number of units produced the smaller will be the cost of production per unit. Goods of the first class are said to obey a law of increasing costs; goods of the second class obey a law of constant costs; and goods of the third class are produced according to a law of diminishing costs. These notions of increasing costs and diminishing costs must not

be confused with the law of increasing returns and diminishing returns discussed in a previous chapter. The law of diminishing returns is concerned with the *relative proportions* of land, labor, capital, and enterprise in the business unit. In the discussion of increasing costs and diminishing costs it is assumed that different productive factors are combined in the most effective proportions and the interest is focused upon the absolute quantities of the several factors rather than upon their relative proportions.

103. The supply schedule. — In the market represented above in which *A*, *B*, and *C* are the purchasers, let us assume that there are two sellers of the good *x*, each of whom is attempting to secure for himself as large a share of the business as possible and whose combined costs of production are set forth in the following supply schedule.

The two competing firms *D* and *E* can together produce:

2 units of <i>x</i> at a cost per marginal unit of	. . . . .	\$ .60
3 units of <i>x</i> at a cost per marginal unit of	. . . . .	.70
4 units of <i>x</i> at a cost per marginal unit of	. . . . .	.80
5 units of <i>x</i> at a cost per marginal unit of	. . . . .	.90
6 units of <i>x</i> at a cost per marginal unit of	. . . . .	1.00
7 units of <i>x</i> at a cost per marginal unit of	. . . . .	1.10
8 units of <i>x</i> at a cost per marginal unit of	. . . . .	1.20
9 units of <i>x</i> at a cost per marginal unit of	. . . . .	1.30

From the above table it appears that good *x* is produced under conditions of increasing costs. While four units of *x* could be sold at eighty cents each, the cost of producing a fifth unit is ninety cents, and if five units are sold in the same market, the price of the five units must be at least as high as the cost of producing the fifth or marginal unit produced. Again, if a sixth unit is desired, since it can be produced at a cost of one dollar, the market price of each of the six units will be not less than one dollar. It costs one dollar and ten cents to produce the seventh unit and, therefore, if seven units are demanded, the price of each one of the seven units will be

at least one dollar and ten cents in spite of the fact that the earlier units were produced at a lower price. If eight units of the good are demanded, the price per unit must be one dollar and twenty cents, so as to cover the cost of producing the eighth unit. Otherwise it will not be produced.

Comparing this supply schedule with the demand schedule given above, we observe that the price of x in this given market will be one dollar per unit, for the reason that if the purchasers attempt to secure it for ninety cents, the producers will be able to furnish only five units at that price, whereas the purchasers desire seven units at ninety cents. Accordingly, they will compete with one another for the five units and drive the price above ninety cents. If the sellers attempt to get one dollar and ten cents per unit, they can sell only five units, since the purchasers desire only five units at that price. But at one dollar and ten cents the producers who are competing with one another in the market will desire to sell seven units. On account of their competition they will drive the price down. At one dollar per unit the purchasers will desire six units of the good. At this price the sellers will be willing to furnish just six units of the good. Therefore, at this point, where supply just meets demand, the price will be fixed. The above illustration is an artificial one in that the cost of production rises so rapidly and so regularly with such small increases in supply. It will serve, nevertheless, to exemplify the principle involved.

104. The supply curve and the combined supply and demand curve. — The first of the two following figures is a graphical illustration of the supply schedule contained in the preceding section. It costs sixty cents to produce the second unit, seventy cents to produce the third unit, eighty cents to produce the fourth unit, etc. This is represented in the figure by making the curve *op* cut the perpendicular lines, 2, 3, 4, etc., at .60, .70, .80, etc. The second figure

represents a combination of this supply curve and the demand curve in the previous paragraph.

In Figure V. on the opposite page the number of units demanded or produced at different prices is represented along the line OX , while the prices which purchasers are willing to pay or for which the competing sellers can produce different quantities of the commodity are represented along the line OY . The market price is fixed at the point where the demand curve

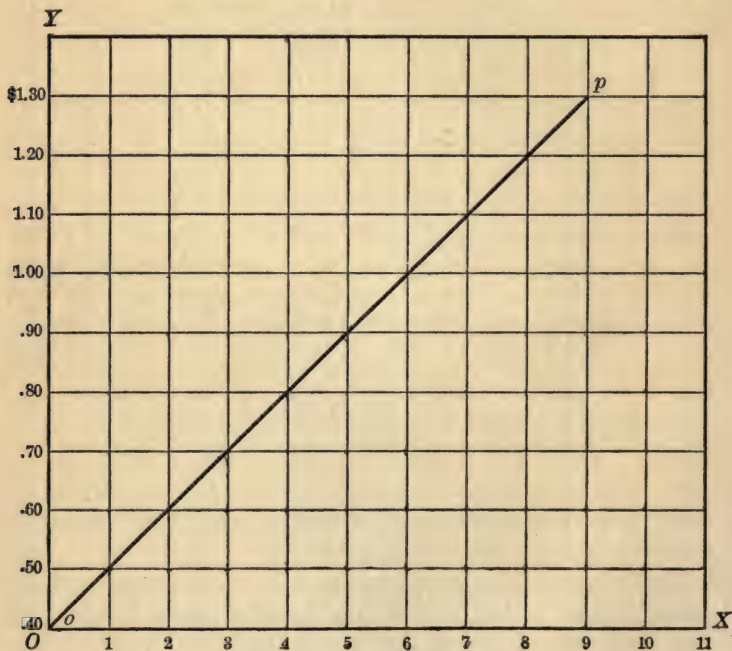


FIGURE IV.—Supply Curve.

and the supply curve cross. With demand what it is, the purchasers will not cease to produce until the supply curve meets the line of the demand curve. On the other hand, the producers cannot afford to produce beyond this point, for the

reason that every additional unit produced is produced at a loss. In this instance the supply curve crosses the demand curve at a point indicating that six units of the good will be produced and that they will be sold at one dollar each.

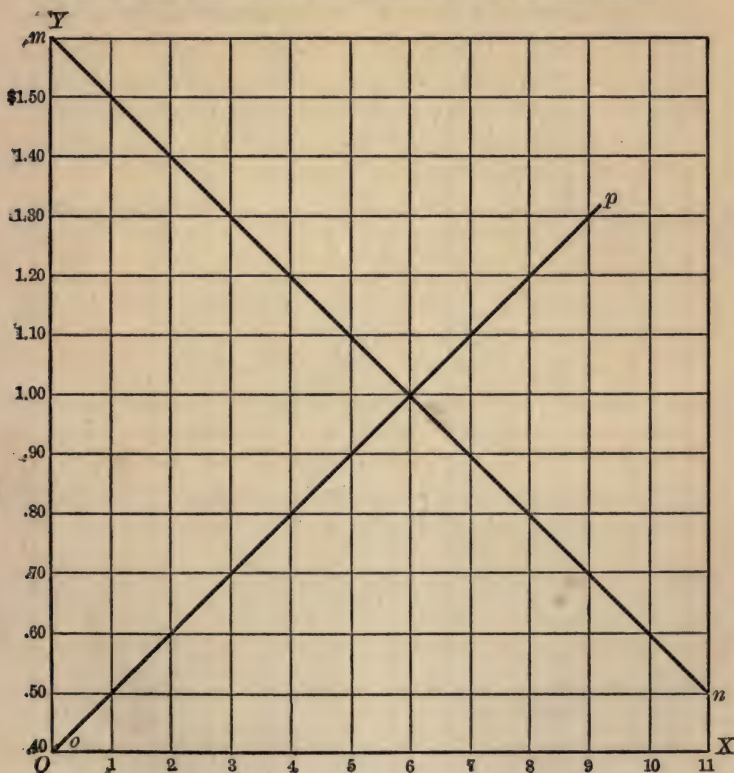


FIGURE V. — Combined Supply Curve and Demand Curve.

105. Constant costs and diminishing costs. — In the preceding illustration we assumed that the competing producers D and E produced the good x under conditions of increasing costs. This condition resulted in making the supply curve

an ascending one as it moves from left to right. In case the good x were produced at a uniform cost per unit, whatever the number of units produced, the supply curve would be represented by a straight line parallel to OX . And under competing conditions the price of the goods would be fixed at the point where this line crossed the demand curve. In other words, the market price would be equal to the cost of production of *each* of the units of the good, whereas in the preceding illustration the selling price was equal to the cost of production of the *marginal* unit produced.

Where additional units are produced at diminishing costs, the supply curve will descend as it moves from left to right. In this case the supply curve represents average costs per unit rather than marginal costs. Production under conditions of diminishing costs furnishes favorable soil for monopoly.

106. Monopoly defined. — Where competition prevails, price, as has just been seen, is regulated by the forces of supply and demand. Under a condition of monopoly, prices are still fixed by the law of supply and demand, but the forces of supply are controlled by the monopolist. Monopoly may, therefore, be defined as such unity of control over the supply of a commodity, whether exercised by one or more persons, as will enable the person or persons exercising such control to regulate prices. In a word, monopoly is the absence of competition. While it is usual to define monopoly as unity of control over supply, it may in some cases consist in unity of demand for a commodity. Thus where there is only one purchaser of a commodity and many producers, that purchaser may fix prices through his control of the amount demanded.

107. Classification of monopolies. — Monopolies may be classified as public monopolies and private monopolies. Public monopolies are those enjoyed by the state and its subdivisions, and are further classified as fiscal and social monopo-

lies. Fiscal monopolies are those which are maintained by the state for the purpose of the revenue that they bring in. The tobacco monopoly in France is an example. Social monopolies are those which are maintained because they conduce to the general welfare. The post office in most civilized countries is an example.

Private monopolies may be subdivided into personal, legal, natural, labor, and capitalistic monopolies. Personal monopolies are due to the fact that certain individuals have unique talents. The product of the inspired poet or the artistic genius cannot be duplicated by a competitor. Private legal monopolies rest upon grants made by the government. Patent, copyright, and franchise monopolies, such as the exclusive use of the streets for railway purposes, are examples. Natural monopolies may be subdivided into natural monopolies of situation, which arise from the monopolistic control of the supply of raw material, as for example in the anthracite coal mines in the United States, and natural monopolies of organization, which arise because of the fact that certain commodities or services are produced under the law of diminishing costs; that is, the larger the output of the commodity or service, the lower is the cost of producing a unit of such commodity or service. The railway business will serve as an example of this class of monopoly. Here there are heavy fixed charges which must first be met from the receipts, but when these expenses are once met additional service does not involve a proportionately increased expenditure. In competing businesses which operate under the law of diminishing expenses there is always a strong pressure inclining these businesses towards monopoly. Labor monopoly controls the labor supply through labor organizations, and thus influences wages. Finally there is the capitalistic monopoly, which owes its monopolistic character to the power and the advantages which come from the massing together

of large amounts of capital. The modern trust is an example of this.

108. The law of monopoly price. — Under monopoly, as under competition, price is regulated by supply and demand, with the difference that in the case of monopoly the supply is artificially regulated by the monopolist in his endeavor to fix prices. The result of this distinction is that as a rule competitively produced goods sell at prices proportionate to their marginal costs of production, whereas monopoly goods sell at prices which the monopolists consider most conducive to their own profits. The law of monopoly price, therefore, is that *the monopolist tends to fix the price of his product at the point which will yield him the largest profits.*

The point at which the monopolist will tend to fix the price of his product will not be the highest price which he can obtain, for if he were to fix the price at this point he would lose many sales which he needs to make in order to secure the maximum profit. Neither will the monopoly price be at a point which will secure the largest number of sales. In fixing monopoly price the monopolist must consider both price and number of sales.

NUMBER OF UNITS SOLD	SELLING PRICE PER UNIT	GROSS RECEIPTS	COST OF PRODUC- ING EACH UNIT	TOTAL COST OF PRODUCTION	PROFIT
100	\$1.00	\$100	50 cents	\$ 50	\$50
200	.80	160	50 cents	100	60
300	.60	180	50 cents	150	30
400	.40	160	50 cents	200	- 40

109. Law of monopoly price illustrated. — Suppose that a producer controls the whole supply of a given good in a certain market and that he wishes to make use of his control to secure as much profit for himself as possible. Suppose further that the above table represents correctly the

number of units of the good which the public will buy at the prices indicated in the second column. Assume also that the cost of producing a unit of the good is the same no matter how many units are produced.

As the price is lowered successively from a dollar per unit to 80, 60, and 40 cents, the number of units which can be sold increases from one hundred to two, three, and four hundred. The gross receipts increase as the number of units sold is increased up to the point where three hundred units are sold. As the number of units sold is increased from three hundred to four hundred, the gross receipts fall from \$180 to \$160. The cost of producing each unit is assumed to be 50 cents. The fifth column represents the total cost of production and is obtained by multiplying the number of units sold by 50 cents, the cost of producing each unit. The last column is obtained by subtracting the total cost of production from the gross receipts. It is evident that the monopoly price for this good under the conditions assumed is 80 cents, since at this price 200 units will be sold and a profit of \$60 will be realized. At any other price represented in the table, whether higher or lower, a smaller profit would be obtained. The - 40 in the profits column represents a minus profit or a loss of \$40.

In the following table the same demand is assumed as in the preceding table but the enterprise is represented as obeying the law of diminishing costs. As the volume of production increases, the cost of production per unit diminishes. In the second table the monopoly price is seen to be sixty cents. At this price three hundred units will be sold and a profit of \$90 will be obtained. This is a higher profit than can be secured at any other selling price represented in the table. Since the difference between the two tables comes from changing the assumption as to the cost of production per unit, it is evident that monopoly price

depends upon cost of production as well as upon the demand for the good.

NUMBER OF UNITS SOLD	SELLING PRICE PER UNIT	GROSS RECEIPTS	COST OF PRODUC- ING EACH UNIT	TOTAL COST OF PRODUCTION	PROFIT
100	\$1.00	\$100	50 cents	\$50	\$50
200	.80	160	40 cents	80	80
300	.60	180	30 cents	90	90
400	.40	160	20 cents	80	80

QUESTIONS

1. What is meant by an exchange?
2. Why do men exchange goods?
3. Make a general definition of value that will include both value in use and value in exchange.
4. Show how values in use are influenced by values in exchange.
5. Compare the concepts of value and weight.
6. What is meant by saying that value is subjective-objective?
7. What is a market?
8. Upon what does value depend?
9. What is a demand schedule?
10. What is a demand curve?
11. Distinguish between a law of diminishing costs and a law of diminishing returns.
12. Construct an imaginary demand schedule and a corresponding supply schedule and explain where the price will be located.
13. Draw demand and supply curves to illustrate the situation described in the preceding question.
14. Define monopoly.
15. Classify monopolies and illustrate the different classes.
16. State the law of monopoly price.
17. Construct tables to illustrate the law of monopoly price.

SUPPLEMENTARY READING

CARVER, *Distribution*, Chap. i.

DEVAS, *Political Economy*, Book II., Chaps. i. and ii.

MARSHALL, *Principles*, Book V.

SEAGER, *Principles*, Chaps. vi. and vii.

SELIGMAN, *Principles*, Part III., Book I.

WALKER, *Political Economy*, Part III., Chap. i.

CHAPTER X

MONEY

110. Difficulties of barter. — In his celebrated work, "Money and the Mechanism of Exchange," Jevons tells of a Parisian singer who made a professional tour around the world and gave a concert in the Society Islands, where she was to receive a third part of the receipts. "When counted her share was found to consist of three pigs, twenty-three turkeys, forty-four chickens, five thousand cocoanuts, besides considerable quantities of bananas, lemons, and oranges. As Mademoiselle could not consume any considerable portion of the receipts herself it became necessary in the meantime to feed the pigs and poultry with the fruit." Here was a case of barter. The natives in paying for entrance to the concert gave directly what they wanted less for what they wanted more, and without the intermediation of a third commodity called money.

While this method of payment is very simple it has many inconveniences, as the prima donna in question undoubtedly appreciated. In the first place, if A wants what B has, it may not also happen that B wants what A has. In that case A cannot get what he desires from B but must continue his search for the article until he finds someone who not only has it but one also who wants the thing which he has.

A second difficulty of barter has to do with remembering the rate of exchange. Where there are only two or three articles to be exchanged this difficulty is not of much consequence. For example, if there are only three commodities which could possibly be exchanged for one another it is neces-

Rate of
Exchange

sary to remember what quantities of each one customarily exchange for certain quantities of the other two. This makes only three ratios of exchange to remember. But where a hundred articles are to be exchanged against one another, if a person has to keep account of all of the different relations of each of the commodities to the other ninety-nine, he will have to remember four thousand nine hundred and fifty ratios. If, however, one of the hundred articles is selected as a measure of value and the value of each of the other ninety-nine articles is to be remembered in terms of the value of this chosen article, then it becomes necessary to remember only ninety-nine ratios of exchange. If it is desired to exchange two articles other than this standard measure of value, their relative values may be determined by comparing each of them with the standard measure.

inval A third difficulty in the way of barter arises from the inconvenience that comes from the fact that the two goods which it is desired to exchange may not be divisible. Thus A may wish to exchange a coat which he has for a cow which belongs to B, and B may be willing to make the exchange provided that A's terms are suitable. If it should happen, however, that they agree that the cow is worth more than the coat, or the coat is worth more than the cow, this decision will stand in the way of the exchange on account of the obvious undesirability of cutting a piece off either the cow or the coat in order to make the exchange an even one.

definition **111. Definition of money.** — Whenever an article is generally acceptable in exchange in a community so that B will take it from A in exchange for what A wants, not because B desires the article but because he knows that practically all other persons will take it from him in exchange for the things which they have and which he wants, that article is money; or, to put it more briefly, any commodity which is generally acceptable as a medium of exchange is money.

The term money is sometimes used in other senses. For example, some authors mean by money what we shall call standard money. In this sense gold coin would be the only money in the United States at the present time. Lawyers sometimes define money as legal tender. In this sense gold coins, silver dollars, subsidiary coins, and greenbacks are money, but not silver certificates nor gold certificates.

- 112. The functions of money.** — Money serves as a
- 1° medium of exchange. It is the intermediary third commodity which makes exchange possible where direct barter would be impossible. This is the first and most important function of money. In the second place, money serves as a
 - 2° measure of value. As we have already seen, the processes of exchange are very much simplified because of the fact that all commodities may have their values estimated in terms of the value of some one commodity, and need not have their values estimated in terms of the value of any other commodity. In the third place, money may serve as a standard of
 - 3° deferred payment. Thus, A borrows a quantity of some commodity from B with the understanding that he will repay it at the end of a year. If the value of the commodity should increase during the year, and if he should return the exact quantity of the good which he had borrowed, he would overpay the debt. On the other hand, if the value of the commodity should decrease during the year, and if he pays back the exact quantity which he borrowed, he will have underpaid the debt. In order that he may return exactly the amount of value which he has received it is desirable that the value of the commodity borrowed should be reckoned in terms of the value of some commodity which is not likely to fluctuate much in value. A good money serves this purpose.
 - 4° Fourthly, money serves as a storehouse of value. A man may desire to change his other property into the form of money in order to keep it until he may make a desirable

investment. He can store his wealth in the form of money at less expense and with greater security than he could store it in many other forms. A fifth function of money is to serve as a basis for credit transactions. This function will be discussed in the next chapter.

113. Forms of money. — Many different commodities have served mankind as money. In the Homeric poems oxen served as a measure of value. Where slavery has prevailed slaves have often served as the medium of exchange and the standard of value. The American Indian used strings of beads called wampum as money; in Massachusetts in 1649 wampum was made legal tender among the settlers in the payment of debts to the amount of forty shillings. In the East Indies cowry shells have been used for small change, while among the Fijians whales' teeth have served the same purpose. Wheat, lumps of salt, cubes of tea, cacao beans, and birds' heads are a few of the commodities which at different times and in different places have served as money. Professor Carl Bücher in speaking of the variety of kinds of money among primitive peoples writes, "The money of each tribe is that trading commodity which it does not itself produce but which it regularly acquires from other tribes by way of exchange." Of the commodities which have already been mentioned as money some served the purpose well and some poorly, but none of them would prove satisfactory in an advanced commercial state.

114. Qualities of a good money material. — There are certain qualities essential to a good money material which makes certain of the metals, and especially the precious metals, peculiarly suitable. Among these qualities are general desirability, portability, durability, homogeneity, divisibility, stability of value, and cognizability.

In the first place, the material should be generally desired in order that it may itself have value; for unless the money

has value it cannot serve to measure value in other commodities, and unless it is generally desired it will not be accepted as a medium of exchange. The money should be portable; that is, its weight and bulk should be small as compared with its value, so that it may be transported for purposes of exchange. Lycurgus, the legend says, gave the Spartans an iron money in order to keep them from becoming a commercial nation; but statesmen to-day desire to advance commerce rather than to retard it. The money material should be durable so that it may be kept over a considerable period of time without deteriorating in quality and consequently losing part of its value. The money material should be homogeneous, that is, of the same quality throughout, so that equal weights will have equal value. Where two or more metals are used for money at the same time, however, as for example gold and silver, it is not important that a given weight of one should equal in value the same weight of the other, provided that they are readily distinguishable from one another and that one will not be taken for the other. Money should be divisible in the sense that it should be possible to cut the material into pieces without a diminution in value. The value of the parts should be equal to the value of the whole out of which the parts are made. The money material should possess stability of value in order that it may serve as a standard of deferred payment. It is important for the debtor to know how much value he is to return at the end of a year or five years, and this is not possible where there is not some standard of value which remains fairly constant. By the cognizability of the material of the money is meant its quality of being easily recognized so that there is no doubt to the persons who receive it as to just what it is. A material that can be made into coins and that will hold the impression that is made upon it possesses cognizability in a high degree. The metals, and especially the precious metals, have been found

to possess these qualities so preëminently that they have come to be the basis of the money of the civilized world.

115. Coinage. — In the earliest use of metals as money they were not coined but passed by weight just as formerly in California, and more recently in Alaska, gold dust passed by weight. A later development was the formation of the metal into rings or into lumps with a stamp on one side indicating the weight. To safeguard the money against clipping, it was finally found desirable to stamp it into flat, circular disks with impressions on both faces and with the edges lettered or milled so as to guard against debasement.

116. Seigniorage. — During the Middle Ages when the lord, or seignior, possessed the monopoly of coinage, he charged for his service by taking a percentage of the metal which was given to him and returning the remainder in the form of coin, in the same way that as owner of the mill he took for the service of the mill a toll of the wheat which was brought to him, and returned the rest in the form of flour. From this practice has come down to us the term, seigniorage, to designate the payment which is made to the government on the occasion of the coining of money. The term seigniorage is used in two senses: it means, first, the charge which the government exacts to cover the necessary cost of coinage; and, secondly, it refers to any charge which the government makes for the act of coining, including a charge in excess of the cost of coinage. The term *brassage* is sometimes used to indicate seigniorage in the first of these senses.

117. Free coinage. — The term *free coinage* is sometimes taken to mean coinage for which no charge is made by the government, but it is more commonly interpreted as meaning that an owner of money metal has a right to take the metal to the mint and to have it converted into coin. If the owner of the metal has this right, there is free coinage, although he may have to pay for the privilege of having the metal made

into coins. In this sense, free coinage is not necessarily gratuitous coinage.

In the United States there is free coinage of gold. The owner of the gold may take that metal to the mint and receive gold coins for it. The owner of silver has not, however, a similar right. There is not free coinage of silver. When it is desired to coin more silver pieces, the government coins them out of silver bullion which it has bought in the market. Nickel and copper coins are likewise coined by the government for itself out of its own metal. There is no free coinage of these metals.

118. The coinage of the United States. — Like all civilized countries, the United States uses both metals and paper in its money system. The metals used are gold, silver, nickel, and copper. The unit of value is the dollar. This is the value of a coin which weighs twenty-five and eight-tenths grains and which is nine parts gold and one part alloy. In other words, the pure gold in the coin weighs twenty-three and twenty-two hundredths grains. Although the gold dollar is our standard of value, it is not actually coined any longer. Our gold coins are the quarter eagle, the half eagle, the eagle, and the double eagle, worth, respectively, two and one half dollars, five dollars, ten dollars, and twenty dollars.

The silver pieces are the dollar, the half dollar, the quarter dollar, and the ten cent piece. The silver dollar is nine-tenths silver and one-tenth alloy. It contains three hundred and seventy-one and twenty-five hundredths grains of pure silver and weighs four hundred and twelve and one-half grains. It is almost exactly sixteen times as heavy as the gold dollar. The fifty cent, twenty-five cent, and ten cent pieces contain less than one-half, one-fourth and one-tenth, respectively, as much silver as the silver dollar.

Nickel is used in the five cent piece and copper in the one cent piece. In paper money, there is the gold certificate, the

silver certificate, the United States note or greenback, treasury notes, and bank notes.

119. Classification of money. — Money may be classified as *standard*, *token*, *credit*, and *representative*. Standard money is money to the value of which the values of other kinds of money are referred. Standard money is further classified as *commodity* money and *fiat* money. Commodity money is subject to free coinage and its supply is regulated automatically. Gold coin will serve as an example in the United States. There is a parity between the value of commodity money and the value of the commodity out of which the money is made. Fiat money is money the value of which is regulated artificially by regulating its supply. Its value is independent of the value of the material out of which it is made. The greenbacks during and for some time after the Civil War were fiat money. As soon as provision was made for their redemption they became credit money. Token money, also called subsidiary money, is small change. In the United States it includes pennies, nickels, dimes, quarter dollars, and half dollars. Credit money is money redeemable in standard money on demand. Representative money is a sort of warehouse receipt certifying that the money upon which it is based is withdrawn from circulation and can be had upon demand. In the United States the gold certificate and the silver certificate are of this character. They certify that gold and silver, respectively, have been deposited in the United States Treasury and are payable to the bearer on demand. Representative money does not increase the quantity of money. It merely furnishes a more convenient form for handling the money already in circulation.

120. Credit money should be elastic. — Credit money is an especially useful form of money in that it furnishes, or should furnish, the element of elasticity essential to a good money system. Because of fluctuations in the volume of

business transacted at different seasons of the year there is a fluctuation in the demand for money at different times. This fluctuation in demand for money tends to produce a constantly altering demand for the importation or exportation of gold. With a properly regulated system of credit money, the volume of which would increase or decrease as the demands for money increased or decreased, the need of importing or exporting gold would be largely obviated.

121. Money in circulation in the United States. — According to a statement issued by the United States Treasury Department, there was in circulation in the United States on January 1, 1916, money of various kinds in the following amounts:

Gold coin	\$612,561,038
Gold certificates	1,281,149,229
Standard silver dollars	66,688,222
Silver certificates	485,708,663
Subsidiary silver	169,979,213
Treasury notes of 1890	2,168,424
United States notes	340,516,432
Federal reserve notes	203,732,980
Federal reserve bank notes	
National bank notes	746,679,970
Total	\$3,909,184,171
Population of continental United States estimated at	101,577,000
Circulation per capita	\$38.48

As already stated, gold certificates and silver certificates are, in effect, warehouse receipts, testifying that there has been deposited an equivalent amount of gold and silver, respectively, which will be paid to the bearer on demand. The total amount of gold coin in the United States January 1, 1916, was over two billion dollars, and included gold held in the Treasury as assets of the government, and gold held as a reserve against Federal reserve notes as well as gold for the redemption of gold certificates and gold coin in actual circulation. There were more than five hundred million

dollars in silver in the country's stock of money. The largest part of this was held in the Treasury and was represented in the circulating medium of the country by silver certificates. The subsidiary silver coins are the fifty, twenty-five, and ten cent pieces. The Treasury notes of 1890 were issued to pay for silver bullion purchased under the law of 1890. They may be redeemed in either gold or silver at the option of the Secretary of the Treasury. The United States notes, commonly called greenbacks, were originally irredeemable but at the present time they are redeemable in gold and when redeemed may be reissued. In order to redeem the treasury notes of 1890 and the United States notes the Secretary of the Treasury keeps on hand a gold redemption fund which varies from a hundred to a hundred and fifty million dollars. The Federal reserve notes and the Federal reserve bank notes are issued in accordance with the Federal Reserve Act of 1913 which will be discussed later. On January 1, 1916, there were no Federal reserve bank notes in circulation. The national bank notes have been issued under the earlier national banking laws. They are obligations of the national banks rather than of the government.

122. Legal tender. — Any commodity which is generally acceptable in exchange is money. Money has been developed through the needs of commerce and not on account of the sanction of the government. Where the government reinforces the general acceptability of money by providing by law that the money in question must be accepted in the payment of debts, the money becomes a legal tender. In the United States gold coin is legal tender for all debts, public and private; silver dollars are legal tender where the contract does not provide otherwise; subsidiary silver coins are legal tender to the amount of ten dollars in one payment; the treasury notes of 1890 are legal tender except where the contract provides otherwise; United States notes are legal tender

for all debts, public and private, except duties on imports and interest on the public debt; the nickel and copper coins are legal tender to the extent of 25 cents; gold and silver certificates and the different forms of bank notes are not legal tender.

123. Oresme's or Gresham's law. — Not only do dishonest persons sometimes clip coins, but even governments have often resorted to the dishonest practice of debasing the coinage by putting into the coins a smaller amount of the precious metals than they had theretofore, and of keeping them in circulation at the old rate. If the coins all look and weigh about alike, most people will accept and pay them out indifferently. But when it is desired to melt coins in order to use the metal in the arts or to ship it abroad where it will be weighed and tested, the persons who select the coins for these purposes will usually see to it that only the best ones are melted or shipped abroad. This results in leaving the poorer coins in circulation at home. This principle, that *the cheaper money tends to drive out the dearer*, was clearly recognized among the ancient Greeks.

In the fourteenth century Nicholas Oresme, later Bishop of Lisieux, explained to his King that whenever the coinage was tampered with so as to leave in the country two moneys with different values, the money with the lower value always drove the money of higher value out of circulation. In 1558 Sir Thomas Gresham, a merchant of London, in a letter to Queen Elizabeth explained that her father's debasement of the coinage had driven the better gold from the country. From this fact the principle is usually referred to as Gresham's law but it is sometimes called Oresme's law because of its earlier and better statement by Nicholas Oresme.

Oresme's or Gresham's law applies not only where the coinage has been debased and where there is a dearer and a cheaper coin of the same metal, but it also applies where different

kinds of money are in circulation at the same time in the same country. If any one kind is overrated in value as money, it will be the coin that is more valuable as bullion than as money that will be melted or shipped abroad to pay international debts. Similarly, depreciated paper money will drive more valuable money out of circulation.

124. The value of money. — Value is power in exchange. The value of money is its power in exchange. The value of money just like the value of anything else depends upon the demand for it and the supply of it. Its value depends upon its marginal utility. If the supply of money is increased, the demand remaining the same, the marginal utility of money is lowered and its value is lessened, and if the supply is decreased, the marginal utility rises and with it the value. On the other hand, if the demand for money increases, the marginal utility rises and with it the value of the money, and if the demand decreases, its marginal utility and likewise its value falls. When the value of money falls, if all other values remain practically the same, the prices of all other commodities rise, for the prices of commodities are the reciprocals of the value of money. If the value of money rises, and all other values remain approximately the same, the prices of all commodities fall. Likewise, if the value of money remains constant, and all other values increase, the prices of all commodities will increase. If all values other than the value of money fall, all prices will fall.

125. The demand for money. — Simple desire for money does not constitute demand for it any more than desire for any other economic good constitutes demand for it. Demand is effective desire. It is desire coupled with the ability to pay the current price for the thing desired. Demand for money, then, is desire for money together with the ability to give some other commodity which will be accepted in exchange for money. The demand for money depends upon the

amount of business which is transacted for which money payment must be made and upon the extent to which money is required as a reserve for credit operations. It is influenced also by the extent to which money is hoarded, and by the demand for the metal of the money for use in the arts because of the effect of these things in reducing the supply of money in circulation. Substitutes for money, such as checks, have the effect of lessening the demand for money.

126. Supply of money. — Where free coinage is permitted the supply of money depends upon the relative cost of producing the money material, as compared with the cost of producing other commodities. The value of the money commodity is equal in the long run to the marginal cost of producing it; that is, to the cost of producing that portion of it which is produced at the greatest cost, and anything which tends to increase the marginal cost of producing the money commodity or to decrease its value tends to curtail its supply. Those forms of money of which the government does not permit free coinage have their supply regulated artificially by the government. In this case, of course, there is no direct relation between the cost of producing the money and its value.

127. The equation of exchange. — Professor Fisher has stated the relation between money and prices in a form that will do much to facilitate an understanding of the subject. In his "equation of exchange" he lets M represent money; V , the velocity¹ of circulation; M' , substitutes for money, such as bank deposits subject to check; V' , the velocity of circulation of substitutes for money; P the level of prices; and T , the volume of trade. The equation of exchange is as follows; $MV + M'V' = PT$, or in words, the amount of money in circulation multiplied by the rapidity of circula-

¹ The velocity or rapidity of circulation here means the average number of times a year a dollar is exchanged for goods.

tion of the money plus the amount of substitutes for money in use multiplied by the rapidity of circulation of the money substitutes is equal to the price level multiplied by the volume of trade. If, for simplicity of illustration, we give the different symbols arbitrary values, we shall see more clearly the meaning of the equation. Let $M = 2$; $V = 22$; $M' = 8$; $V' = 54$; and $T = 476$. If we substitute these arbitrary values for the corresponding symbols and solve the equation, we shall find that P equals 1. If there should be a change in any of the magnitudes represented in the equation, there will result a change in the value of P . If M , M' , V , or V' is increased or if T is diminished, P will be found to be more than 1. On the other hand, if M , M' , V , or V' is diminished, or if T is increased, P will be less than 1. In other words, the price level increases as the amount of money in circulation, or its rapidity of circulation, or the amount of money substitutes, or their rapidity of circulation, increases; the price level decreases as the volume of business to be done with money and money substitutes increases. The very marked increase in the cost of living, *i.e.* increase in the price level, during the past twenty years is explained to a considerable extent by the increase in the amount of money and of money substitutes in circulation during that time.

128. The quantity theory of money. — The equation of exchange as given above is a modified form of the quantity theory of money. That theory states that an increase or decrease in the amount of money in circulation is followed by a proportionate increase or decrease in the level of prices. Or, as stated by John Stuart Mill, "if the whole money in circulation was doubled, prices would be doubled. If it was only increased one-fourth, prices would rise one-fourth. . . . When there had been time for the increased supply of money to reach all markets, or (according to the conventional metaphor) to permeate all the channels of circulation, all prices

would have risen one-fourth." In the discussion which follows this extract Mill makes allowance for the influence of changes in the rapidity of circulation, but he does not appreciate the importance of money substitutes as affecting changes in the general level of prices. If, in the equation in the preceding paragraph, we assume that M increases from 2 to 4, we shall not find that P increases from 1 to 2. But if M increases from 2 to 4 and M' also is doubled (*i.e.* increases from 8 to 16), P will, other things being equal, increase from 1 to 2. There is, however, no reason for believing that a doubling of the amount of money in circulation will normally result in doubling the amount of money substitutes. Therefore the quantity theory *in its extreme form* is untenable.

129. The cost of production theory. — Opposed to the quantity theory of money is the cost of production theory, according to which the value of money depends upon the cost of producing it, rather than upon the supply of it and the demand for it. In general, we may say that the value of any commodity, whether wheat or shoes or gold coin, depends upon the demand for and the supply of the commodity, and in the case of most commodities the supply is limited by the cost of production. There is, therefore, no essential difference between the cost of production theory when properly understood and a reasonable statement of the quantity theory. It must be understood, however, that the cost of production of money affects the level of prices of commodities only through limiting the supply of money. Viewed in this light the cost of production theory harmonizes with the quantity theory. In fact it needs the quantity theory to complete its explanation.

130. Bimetallism. — In the United States at the present time gold is the standard money from which the value of other forms of money is reckoned. The value of the gold coins, in turn, is regulated by permitting the free coinage of

gold. We have a "single standard" of money and that standard is gold. Where there is free coinage of both gold and silver there is, nominally at least, a "double standard" of money, or bimetallism.

Before 1873 we had bimetallism in this country. The government fixed the weight of a gold dollar, after some experimentation, at 25.8 grains of standard gold. Since standard gold is nine-tenths fine, the weight of the pure gold in a gold dollar is 23.22 grains. The weight of a silver dollar is 412.5 grains. It contains 371.25 grains of pure silver. The silver in a silver dollar is, therefore, approximately sixteen times as heavy as the gold in a gold dollar. Thus, by law, an ounce of gold in the form of money is worth approximately sixteen ounces of silver in the form of money. The mint ratio is 16 to 1. But an ounce of uncoined gold may be worth more or less than sixteen ounces of uncoined silver, depending upon the relative demands for, and supply of, the two metals in the markets of the world. When the market ratio between the two metals is less than the mint ratio the gold in the gold dollar is less valuable than the silver in the silver dollar. Since the two coins are equally effective in the payment of debts, debtors will choose to make payments in the money which can be secured the more cheaply, namely, gold. On the other hand, when the market ratio between the two metals is greater than the mint ratio, the silver in the silver dollar is worth less than the gold in the gold dollar. Under these circumstances debtors will prefer to make their payments in silver, if there is free coinage, since it can be secured more easily than gold.

When silver is overvalued at the mint the owners of gold will withhold their gold from coinage and the gold coins in circulation, in accordance with Gresham's law, will be withdrawn from circulation. On the other hand, when gold is overvalued at the mint, silver will cease to circulate. In

order that gold and silver may both circulate as money at the same time under a system of bimetallism, that is, under free coinage of both metals, it is necessary that the market ratio and the mint ratio do not vary appreciably from one another. No one nation exercises a sufficiently strong influence upon the market for the precious metals to keep the market ratio from varying from its mint ratio. A strong combination of nations might do so by international agreement, but such agreement is hard to secure. The principal nations of the world have therefore adopted the single gold standard in order to avoid the fluctuation in standards under a system of bimetallism.

131. Index numbers of prices. — Where the prices of a number of commodities increase or decrease during a given period, but at different rates, it is possible to indicate the general increase or decrease by the use of index numbers. If, for example, we find that :

2 bushels of commodity *A* sold for \$1.00 in 1900
 100 pounds of commodity *B* sold for \$1.00 in 1900
 5 yards of commodity *C* sold for \$1.00 in 1900

and that

2 bushels of commodity *A* sold for \$1.50 in 1910
 100 pounds of commodity *B* sold for \$1.30 in 1910
 5 yards of commodity *C* sold for \$1.25 in 1910

we may average the selling prices in 1900 and in 1910 and conclude that the prices of the three commodities considered together increased from \$1.00 $(\frac{\$1.00 + \$1.00 + \$1.00}{3} = \$1.00)$

to \$1.35 $(\frac{\$1.50 + \$1.30 + \$1.25}{3} = \$1.35)$, or thirty-five per

cent. If, however, three times as many dollars' worth of *A* is sold as of either of the other commodities it will be necessary to "weight" the averages. This may be done by

writing the price of *A* three times in the price columns and dividing by five instead of by three. The average for 1900 will still be one dollar but the average for 1910 will now be $\$1.50 + \$1.50 + \$1.50 + \$1.30 + \$1.25 = \1.41 . We shall

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now say that as far as these three commodities are concerned prices have gone up forty-one per cent. If now, we should take a large number of representative commodities and calculate index numbers for prices in the various years we should be able to say whether, and how rapidly, prices as a whole were moving up or down. And since the prices of commodities and the value of money are reciprocals we should also be able to say how rapidly the value of money was decreasing or increasing. Thus, if the general level of prices increased from 100 to 141, or forty-one per cent in a given period, the value of money decreased from 100 to $\frac{100}{141}$ (70.9) or 29.1 per cent.

132. The multiple standard of value. — Since it is unfair to force the debtor to pay his debts in money which has increased in value and consequently which is harder to get than the money which he borrowed, and since it is unfair to force the creditor to receive payment for the debt in a money which has depreciated in value, many devices have been proposed to overcome the fluctuations in the value of money. One of these which has been widely discussed is the device of a multiple, or tabular, standard of money. The proponents of the multiple standard propose that an official index number of prices be provided, according to which debts shall be paid. If a man borrows a hundred dollars for five years and if money depreciates in the meantime, the debtor, it is proposed, shall pay back at the end of the five years, in addition to the interest agreed upon, not one hundred dollars, but a sum equal in value to the original one hundred dollars. On the other

hand, if the value of the money is increased, a smaller number of dollars should cancel the debt.

133. The compensated dollar. — A plan having a similar purpose in view is that of readjusting the official amount of gold in the gold dollar from time to time so as to keep the value of the gold dollar constant. This plan does not contemplate the recoinage of gold coins or the changing of the actual amount of bullion in the dollar. It would leave the size of the dollar the same as at present but it would provide that the holder of the coin or of a gold certificate could present the gold coin or gold certificate at the treasury and receive for it gold bullion, not at the rate of 23.22 grains of gold to the dollar, but at such a rate that the amount of gold bullion which would be paid for the gold coin or the paper money would have a constant value. The variation in the amount of redemption gold to the gold dollar would be determined by a system of index numbers of prices after the plan proposed for the multiple standard.

QUESTIONS

1. What is meant by barter? Why is barter often inconvenient?
2. Define money.
3. What are the functions of money?
4. Name some commodities other than the metals and paper which have served as money.
5. What qualities are to be found in a good money material? Explain.
6. Why are coins stamped and milled?
7. What is the origin of the term seigniorage? What is brassage? What is seigniorage?
8. What is meant by free coinage? Is there free coinage of gold in the United States? Is there free coinage of silver?
9. Name the coins of the United States.
10. What is meant by standard money? By token money? By credit money? By representative money?

11. Name the different kinds of money in circulation in the United States.

12. What is meant by legal tender? Which kinds of money are legal tender in this country and to what extent?

13. What is Gresham's law? Explain why it is true.

14. Upon what does the value of money depend? What is the effect upon prices of an increase in the value of money?

15. Upon what factors does the demand for money depend? The supply of money?

16. State Professor Fisher's equation of exchange. Explain its meaning.

17. What is the quantity theory of money? The cost of production theory? Is it possible to harmonize the two theories?

18. What is bimetallism? What advantage was claimed for it? Why has the importance of this advantage declined in recent years?

19. What is the purpose of index numbers of prices? Explain their construction.

20. Why is a multiple standard of value desired?

21. Explain the principle of the compensated dollar.

SUPPLEMENTARY READING

FISHER, *The Purchasing Power of Money*, Chap. ii.

HOLDSWORTH, *Money and Banking*, Chaps. i.-vi.

JOHNSON, *Introductory Economics*, Chap. xv.

SEAGER, *Principles*, Chap. xix.

SELIGMAN, *Principles*, Chaps. xxviii. and xxix.

TAUSSIG, *Principles*, Chaps. xvii. and xviii.

CHAPTER XI

CREDIT AND BANKING

134. The nature of credit. — The word credit comes from the Latin, *credere*, to believe. The term is used in many different senses but for our purpose we may define it as confidence that a borrower will give back money or money's worth. This confidence or belief may be founded upon a knowledge of the man's character or his economic status, or his liability under the law, or upon a combination of these. We say that a man *has* credit when he enjoys some one's confidence to such an extent that that person will let him have money or money's worth on account of his belief that it will be returned to him. A person *gives* credit when he lends money or money's worth in the belief that it will be returned to him.

135. Book credit. — When the grocer, John Doe, sells goods to the gardener, Richard Roe, for which the latter does not pay at once, he debits (Latin, *debere*, to owe) him with the amount of the purchase. When Richard Roe later brings garden truck to the store he receives credit for it on John Doe's books. At the end of a month or of several months the debit and the credit columns of Richard Roe's account are totaled and if the debits exceed the credits, Richard Roe pays the difference to John Doe, while if the credits exceed the debits, John Doe pays the difference to Richard Roe. In either case, transactions involving many dollars' worth may be settled by the use of book credit with the payment of a trifling amount in money.

136. The promissory note. — Suppose that in the illustration given in the preceding paragraph, when John Doe and Richard Roe came to make a settlement it was found that Richard Roe owed John Doe a balance of one hundred dollars which he was unable to pay immediately. John Doe desires the money, as he wishes to use it to pay a debt. Accordingly, he informs Richard Roe that if the latter will give him his promissory note for the amount, he (John Doe) will have it discounted at the bank. Thereupon, Richard Roe fills out and signs and gives to John Doe the following promissory note.

“WASHINGTON, D.C., March 15, 1916.

Three months after date for value received, I promise to pay John Doe, or order, one hundred dollars with interest at six per cent per annum until paid.

(Signed) RICHARD ROE.”

John Doe now credits Richard Roe on his books with one hundred dollars and the account is balanced.

137. The bank note. — John Doe must pay one of his creditors one hundred dollars and it would simplify matters very much if he could pay him with Richard Roe's promissory note. But the creditor is unwilling to accept the note in payment. Therefore, John Doe goes to his bank and sells Richard Roe's note to it after he has indorsed it by writing his name on the back of it. The bank gives John Doe one hundred dollars in gold or silver if he desires it, but he probably wishes to receive the money in the form of paper. Any one of several kinds of paper may be used to make the payment but it happens that it is made in bank notes. The bank note is a promissory note issued by the bank and essentially it is a promise to pay a certain sum of money on demand. John Doe's creditor will accept one hundred dollars in promissory notes of the bank because he knows that others will gladly accept the notes in turn from him.

138. The check. — But perhaps John Doe, instead of receiving bank notes for the promissory note which he sold to the bank, accepted a deposit of one hundred dollars; that is, instead of receiving the money he received the right to call for the money at any time. The bank furnished him with a pass book in which there was a statement of his account and a check book containing blank checks which he might fill out to make payments until he had exhausted his deposit. John Doe now writes a check in favor of his creditor and sends it to him. It reads as follows:

“WASHINGTON, D.C., March 15, 1916.

The Riggs National Bank.

Pay to the order of John Robinson (\$100.00) one hundred dollars.

(Signed) JOHN DOE.”

John Robinson, Doe's creditor, takes the check for a hundred dollars to his own bank, namely, the Second National Bank, and deposits it to his credit there. In other words, he sells the check to the Second National Bank and instead of receiving money for it receives a right to draw money from the bank.

139. The clearing house. — The Second National Bank now owns a check signed by John Doe and indorsed by John Robinson directing the Riggs National Bank to pay to the order of John Robinson, one hundred dollars. The Riggs National Bank, therefore, owes the Second National Bank one hundred dollars. During the course of the day the Second National Bank receives other checks drawn on the Riggs National Bank, while the Riggs National Bank receives similar checks drawn upon the Second National Bank. In smaller towns each bank at the close of the day presents its checks to the other for payment and the bank against which the larger amount was drawn pays the difference in money. In the larger places the banks, instead of sending messengers to each bank against which they have checks, send them to a

central clearing house, where representatives of all of the banks meet and exchange checks drawn against the respective banks represented settling the differences in money or in acceptable credits.

140. The bank draft. — John Robinson, let us say, owes one hundred dollars to John Smith, a New York merchant. Instead of sending him his check for the amount, he purchases a bank draft which he sends to him. The draft is an order by the Second National Bank of Washington, for instance, directing a certain New York bank with which it has a deposit to pay to the order of John Smith one hundred dollars. John Smith presents the draft to his bank in New York and receives credit for it. The bank draft, therefore, resembles a check rather than a bank note.

141. The function of a bank. — The main function of a bank is to deal in credit. It buys and sells the credit of others, and it exchanges its own credit, which is so generally acceptable in exchange that it does the work of money for some one else's credit which is not generally acceptable in exchange. The two principal operations by means of which a commercial bank performs its function are discount and deposit. In addition to these two operations, certain banks have the right to issue notes.

142. Discount. — In our illustration above, John Doe sold Richard Roe's promissory note to the bank. In technical language, the bank discounted the note. The interest on the note may have been deducted at the time of discounting the note or it may be collected when the note is due. John Doe might have presented a note signed by himself to the bank and the bank would have discounted it if it considered that his credit was good enough. Or, in case his credit was not sufficiently good, he might have pledged as collateral or security for the payment of the debt, bonds or stocks or other property.

143. Deposit. — John Doe might have received money for the note which was discounted, but he found it more convenient to leave the money on deposit with the bank and to have it paid out on checks as it was needed. The deposit does not consist of actual money but of the right to draw money from the bank. One may secure this right to draw money by leaving money at the bank; the word "deposit" suggests this origin. But as a matter of fact, only a small percentage of deposits originate in this way. For the most part they have their origin in discounts; that is, the depositor secures the right to draw money from the bank in exchange for his own note or for the notes of other persons sold to the bank by him.

144. Note issue. — Since the Civil War certain banking associations known as national banks have had the right to place their notes in general circulation. The right to issue notes was restricted to national banks by levying a prohibitive federal tax on the note circulation of all other banks. The national bank notes were secured by the deposit of United States government bonds which had been purchased by the banks and which were left in the keeping of the Treasury Department as a pledge that the national banks would redeem their own bank notes when they were presented for payment. In addition to the deposit of government bonds the national banks also deposited in cash with the Treasury Department five per cent of the amount of their note circulation.

145. Weakness of the national banking system. — While the national banking system has had the merit of issuing notes that were absolutely safe it has also had certain defects. Among these the most important have been the inelasticity of its note issue, the immobility of its reserves, and the lack of a discount market.

At certain seasons of the year the volume of business transacted is greater than at other seasons and correspondingly there is a greater need for currency at certain seasons than at

other seasons. For example, in the fall, when the products of agriculture are being marketed, there is a withdrawal of money from the eastern cities to the agricultural regions of the West. This leaves a shortage of money in the East and creates a demand for the importation of gold from abroad. When the money returns from west to east the gold tends to flow out of the country again. Under a properly regulated banking system the amount of bank notes in circulation would be increased when there was a demand for more money, and when the demand had passed the amount of bank notes would contract again. In other words, the bank notes would be an elastic element in the currency system of the country. But under our national banking laws the issue of bank notes has not been elastic. Since the banks have had the right to issue notes up to the amount of the United States bonds deposited in the Treasury they have not been inclined to increase or decrease the amount of note issue except as they have found it convenient to buy or sell government bonds. The amount of bank notes outstanding has depended upon the market for government bonds rather than upon the needs of the country for currency.

In the second place, the national banks have had a defective system of reserves. Banks in certain cities designated as reserve cities were compelled to keep a reserve of 25 per cent of their deposits and banks in other cities were compelled to keep 15 per cent reserves against deposits. But the banks in the non-reserve cities might keep three-fifths of the fifteen per cent reserve on deposit with banks in the reserve cities. This left a reserve of only six per cent of the deposits actually in the vaults of the country banks. The banks in the reserve cities were compelled to keep at least one half of their 25 per cent reserve in their own vaults and were allowed to deposit the other half with banks in central reserve cities (New York, Chicago, and St. Louis). Banks in central reserve cities were

compelled to keep their 25 per cent reserves in their own vaults. In times of financial crisis a failure of a bank in a central reserve city might involve banks in reserve and non-reserve cities because those banks had a considerable part of their reserves deposited with the failing bank. On the other hand, perfectly stable banks were not likely to come to the assistance of their weaker neighbor banks in times of distress for fear that they should weaken their own reserves and place themselves in danger. Each bank fought to save its own reserves. There was no thought of mobilizing the reserves of all banks into one mass so as to protect the deposits of all banks.

In the third place, there was no proper discount market. A bank might be in a flourishing condition, with its portfolio full of gilt-edged securities, but if a run were started on it, it would be impossible for it to sell its securities to obtain funds to meet its obligations. Under a good banking system it should be possible for a bank to hypothecate its first-class securities and secure funds with which to meet its obligations.

146. The Federal Reserve Act.—When the need for banking reform was sufficiently recognized the Federal Reserve Act was passed (1913) modifying the national banking system in many important features. A Federal Reserve Board, consisting of seven members, was created to supervise the system. Under the direction of this Board the country has been divided into twelve districts, in each of which there has been established a Federal reserve bank. National banks in each of the districts have been compelled to subscribe to the capital of the Federal reserve bank of their district, and banks other than national banks have been allowed to subscribe to the capital of the new banks under certain conditions. Banks subscribing to the capital of the Federal reserve banks are called member banks.

Under the new law the system of note issue has been essen-

tially modified. The Federal reserve banks are gradually to take over the government bonds which have heretofore served as the security for the notes issued by the national banks, and they may issue Federal reserve bank notes to take the place of the national bank notes that are retired. This substitution of Federal reserve bank notes for the national bank notes does not constitute a radical change in the system. But in addition to the Federal reserve bank notes there are issued under the new plan Federal reserve notes. The Federal reserve notes are to be issued to the Federal reserve banks by the Federal Reserve Board and are to be secured, not by government bonds, but by commercial paper which has been purchased by the reserve banks from member banks. These Federal reserve notes are to furnish the elastic element in the currency system. Their amount will increase when there is much money work to be done and decrease when there is less money needed. The new system is elastic where the old system was inelastic.

In the second place, the reserves will be mobilized under the new system so that the reserves of each member bank will serve as a support for all other banks in the system. After a period of transition to the new system has passed a certain definite proportion of the reserves of the member banks which must be held against deposits is to be kept on deposit with the Federal reserve banks. The reserve banks are thus in a position to use a part of the reserves to discount commercial paper for member banks. The reserve banks must keep on hand a reserve of 35 per cent against the deposits kept with them by member banks.

In the third place, when depositors threaten a "run" on a member bank the member bank may, if it possesses suitable commercial paper, present this paper to the reserve bank for rediscount. If the reserve bank is unable to rediscount the paper out of its ordinary funds, it may apply to the Federal

Reserve Board for Federal reserve notes and make payment for the rediscounted paper in these notes. The reserve bank is required to maintain reserves in gold of not less than forty per cent of its Federal reserve notes but this requirement may be relaxed by the Federal Reserve Board. The result of the provision for rediscounting the paper of member banks is that no bank that is solvent and that does a conservative banking business is likely to be put in such a position in times of financial stress as to be unable to secure money with which to meet the demands of its depositors.

QUESTIONS

1. What are some of the different uses of the term "credit"?
2. What is meant by book credit? Illustrate.
3. Make out a promissory note.
4. What is a bank note?
5. What is a check and how is it used?
6. What is the purpose of the clearing house?
7. What is a draft?
8. What is the function of a bank? What are the principal operations by means of which it performs this function?
9. What is meant by the term discount? By deposit? By note issue?
10. What was the principal weakness of the system of issuing bank notes which prevailed before the passing of the Federal Reserve Act of 1913?

SUPPLEMENTARY READING

HOLDSWORTH, *Money and Banking*, x.-xiv, xxi., and xxii.
JOHNSON, *Introductory Economics*, Chap. xvi.
SEAGER, *Principles*, Chap. xx.
SELIGMAN, *Principles*, Chaps. xxx. and xxxi.
TAUSSIG, *Principles*, Chaps. xxiv.-xxviii.

CHAPTER XII

INTERNATIONAL EXCHANGE

147. The balance of trade. — Where a country exports to another country more goods than it imports from that country it is said to have a favorable balance of trade. Where these conditions are reversed it is said to have an unfavorable balance of trade. The origin of these terms goes back to an earlier day when it was considered in the highest degree desirable to have a country's supply of money increased and very undesirable to have it diminished because specie, *i.e.* gold and silver, would be gained for the country by having an excess of exports and lost for it by having an excess of imports. In recent times, however, the idea of a favorable balance of trade has lost its importance. It is felt that in the long run the payments to be made to foreign countries will balance the payments received from foreign countries and unless a country contains gold mines and is therefore in the business of producing gold it will not export more gold than it imports.

148. Domestic exchange. — A resident of Chicago who owes a debt of one thousand dollars in New York might conceivably cancel the obligation by sending one thousand dollars in currency to his New York creditor. It is very improbable, however, that he will pursue this course. Instead he will probably go to his bank in Chicago which has a deposit in New York or which has a deposit with another bank which has a deposit in a New York bank, and purchase from this bank an order directing the New York bank to

pay his creditor one thousand dollars. He pays his bank one thousand dollars plus the exchange and sends the draft to his creditor, who presents it at his bank in New York and receives credit for one thousand dollars. The creditor's bank sends it to the New York clearing house and it finally reaches the New York bank upon which it was drawn. As a result of the transaction the Chicago bank has decreased its New York deposit by one thousand dollars and has increased the money in its own vault by the same amount. If all payments were being made from Chicago to New York and none in the opposite direction, the Chicago banks would soon have depleted their New York deposits and would have a corresponding amount of money in Chicago. When this point was reached they could sell further drafts upon New York only through the process of establishing further credit there, as, for instance, by shipping currency from Chicago to New York. Under these circumstances purchasers of New York exchange in Chicago would have to pay for it not only its face value but also the cost of shipping currency from Chicago to New York. Thus, the man who owed a thousand dollars in New York might have to pay in Chicago a thousand dollars and forty or fifty cents to cancel the obligation. On the other hand, when there is a great excess of payments from New York to Chicago the deposits belonging to Chicago banks in the New York banks increase greatly and it becomes desirable to have currency shipped from New York to Chicago. At such times a Chicago bank which wishes to increase its New York deposits can often purchase from other Chicago banks drafts on New York on such terms that for less than a thousand dollars paid in Chicago it can secure the right to receive a thousand dollars in New York. In other words, under these conditions New York exchange in Chicago is at a discount. It must not be supposed that at one time New York money is more valuable

and that at another time Chicago money is more valuable. In either case it is the United States money that is involved. It is not a problem of the value of money but of the cost of shipping money from one place to another. When the demand in Chicago for New York drafts greatly exceeds the supply, New York exchange in Chicago is at a premium. When the supply of New York drafts greatly exceeds the demand for them in Chicago, New York exchange is at a discount in Chicago. The matter is very simple when it is considered in terms of the burden of shipping money from one point to another. In the case of foreign exchange the problem appears to be complicated by reason of the fact that the money of two countries is involved. In principle, however, the problem will be found to be the same.

149. Foreign bills of exchange. — A draft is also known as a bill of exchange. It is an order by which the person who draws the instrument directs a second person (the drawee) to pay a sum of money to a third person (the payee). A foreign¹ bill of exchange differs from a domestic bill of exchange principally in that the drawee and the drawer usually live in different countries. There is no essential difference between the two forms. The student of foreign exchange is sometimes temporarily confused by the fact that different countries have different monetary systems, but the fluctuations in rates of exchange are not caused by this fact.

150. The rate of exchange. — The rate of exchange is the cost of paying foreign indebtedness per unit of money. Exchange between England and the United States is quoted in dollars and cents per pound sterling; exchange between France and England in francs per pound sterling, and ex-

¹ In this book the distinction between foreign and domestic exchange is that in one case the drawer and drawee reside in different *countries* and in the other case they reside in the same *country*. According to another usage of terms foreign bills of exchange are drawn upon someone residing outside the *state*; domestic bills, upon someone residing within the *state*.

change between France and the United States in francs per dollar. There is as much pure gold in one thousand English sovereigns, *i.e.* in one thousand pounds, as there is in four thousand eight hundred sixty-six dollars, approximately. In other words, the English sovereign is worth \$4.866⁺. If a person living in New York had a debt of one thousand pounds sterling to pay in London, he might cancel the debt by sending \$4866⁺ in American gold to London. Similarly, if a person living in London had to pay a debt of \$4866⁺ in New York, he could satisfy the claim by sending one thousand pounds sterling to New York. But in either case it would cost twenty dollars or more to send the gold and it would certainly be wasteful to send gold in both directions at the same time. A much simpler way to settle the two accounts would be to cancel the indebtedness without shipping the gold. Thus A in New York owes a thousand pounds to B in London, and C in London owes a thousand pounds to D in New York. If by agreement, C pays a thousand pounds to B and A pays the equivalent of a thousand pounds in dollars to D, both debtors have discharged their indebtedness and both creditors are satisfied. Or D may make out an order in the form of a bill of exchange directing C to pay one thousand pounds to A. D sells this order to A and receives for it the equivalent in dollars of a thousand pounds. A indorses the order, making it payable to B and sends it to B. B presents it to C for payment and C pays a thousand pounds to B. In case there were as many A's and B's as there were C's and D's; that is, in case there was the same amount of indebtedness due from New York to London as from London to New York the equivalent of a thousand pounds in dollars would be \$4866. The rate of exchange is 4.866, or, in other words, sterling exchange is at par.

If, however, there are a great many more A's and B's than C's and D's; that is, if the payments to be made from

New York to London greatly exceed those to be made from London to New York, some gold will have to be shipped from New York to London to settle the difference in the accounts. Since it ordinarily costs two cents a pound sterling or twenty dollars a thousand pounds to ship the gold, the A's who are unable to purchase orders from D's will be compelled to pay \$4866 plus \$20, or \$4886, to cancel their obligations of a thousand pounds in London. Hence, the A's, in preference to paying for the shipment of gold, will compete with each other to secure the bills of exchange drawn by the D's upon the C's. This will drive the price of these bills of exchange above par. When the rate of exchange reaches 4.886; that is, when the price of D's order upon C for the payment of a thousand pounds has been bid up to \$4886 by the A's, the competition will cease, since it would be cheaper to ship gold than to pay a higher price for the bill of exchange.

If, on the other hand, there are more C's and D's than A's and B's, the balance in gold will be shipped from London to New York. In that case it will cost D twenty dollars to bring the thousand pounds which was due him in London to New York. Rather than pay the twenty dollars for shipping the gold he will sell his bill of exchange for less than \$4866. But he will not consent to sell it for less than \$4846 because it would be more profitable to have the money paid to his account in London and shipped to New York than to sell the order at a rate below 4.846. The rates of exchange at which gold is shipped in either direction are called the *gold points*; that is, when the rate of exchange is 4.886, approximately, gold is shipped from New York to London and when the rate of exchange is 4.846 gold is shipped from London to New York.

While under ordinary conditions the rates of sterling exchange will not vary more than two cents above or below par, under the abnormal conditions prevailing in time of war a considerably greater deviation from par may be reached be-

fore gold is shipped. This is due to the fact that freight and insurance and interest charges have advanced and that the cost of shipping the gold has consequently been increased. In September, 1915, the rate of sterling exchange sank as low as 4.50 owing to our heavy exportations to Europe without corresponding importations before gold was imported and loans negotiated to relieve the situation.

151. Financial bills of exchange. — Bills of exchange that have their origin in commercial transactions are called commercial bills of exchange. In contradistinction to these are financial or bankers' bills of exchange. These are bills drawn by a bank in one country upon a bank or a branch in another country in favor of a third party. They have their origin, not in the fact that goods have been shipped out of the country, but in the fact that there is need of foreign exchange and they are created to supply this need.

A consideration of financial or bankers' bills of exchange will help to show why the rate of exchange does not fluctuate violently between the two gold points. A New York bank, for instance, engaged in selling foreign exchange has money on deposit in London. Suppose the demand for London exchange in New York is greater than the supply. New York importers seek in vain for London commercial bills of exchange and it looks as if the price of London exchange will go to the upper gold point and that gold will have to be exported. Before this point is reached the bank will normally sell financial bills of exchange; that is, it will direct its London correspondent to pay to its customers certain funds which are on deposit in London. The customers endorse the bills of exchange and send them to their creditors in London, who present them at the bank and receive payment. Let us suppose that the banker sells the exchange at the rate of 4.876. For each one thousand pounds he now has to his credit in New York ten dollars more than he had in London.

Suppose that now after a short period of time a change takes place in the relative amounts of imports and exports and that there is an excess of London exchange in New York. The price of London exchange in New York falls — let us suppose it falls as low as 4.856. At this point the New York banker buys London Exchange in the New York market, sends it to London and increases his deposit in London. For each one thousand pounds in bills of exchange thus bought he has credited to his account in London the equivalent of twenty dollars in gold more than he had before making the two transactions. There are a great many banks engaged in buying and selling foreign exchange and therefore competition is very keen and very small fluctuations in the rate of exchange are sufficient to induce the banks to transfer their credit from one side of the ocean to the other. This fact conduces greatly to the stability of foreign rates of exchange.

152. Three-cornered exchange. — The rate of exchange between two countries is influenced, not alone by the relative imports and exports between the two countries, but also by imports and exports between these and other countries. Thus, for example, the exports from the United States to England exceed the imports from England to the United States. Again, Brazil exports more to the United States than she receives from the United States, and England exports to Brazil more than she receives from Brazil. Under these circumstances if the only factor to be considered as influencing sterling exchange was the difference between the exports and imports between the United States and England, the rate of sterling exchange would be constantly above par, but because of transactions with other countries this influence is overcome. Thus there is a large supply of London bills of exchange in New York and the importers from England do not need all of them, but the importers from Brazil buy London exchange in New York and send it to Brazil, where it is

readily accepted in payment. With this London exchange the Brazilian merchants pay their debts in London. This three-cornered exchange equalizes the supply and demand for London exchange in New York and thus keeps the rate of exchange more nearly at par than it would otherwise be. This illustration discloses the fact that whatever significance the balance may have depends, not upon the relation of exports to imports between two countries, but upon the relation which the exports to all countries bear to the imports from all countries.

153. The effects of the shipment of gold. — Where a country's exports exceed its imports it might seem at first sight that there would be a tendency for that country to continue to import gold, to balance the account. A moment's reflection, however, will make plain the fact that there is also a powerful countervailing tendency at work. As gold continues to be shipped into a country, the supply of money in that country increases and prices rise. With prices higher in this country than in foreign countries, the buying of our commodities by foreigners will fall off, while the purchasing of foreign commodities by our merchants will increase. The pendulum will continue thus to swing until our imports exceed our exports. But as we export gold from our country the money supply decreases and prices fall. Our country, then, is a good market in which foreigners may purchase what they need at a low price. The result of this influence will be that the pendulum will swing in the other direction and that our exports will catch up with our imports. The consequence of this is that there is no danger that we shall have too much or too little gold in the country, or that we shall continue to export it to such an extent as to sacrifice our necessary supply of it. Of course, if our country is a gold mining country, it will be natural for us to export gold continuously, but we are no worse off by reason of this ex-

portation than we should be by reason of the exportation of any other commodity. In a word, each country which is engaged in commerce with other commercial countries of the world will tend to keep on hand the amount of gold which is needed, provided, of course, that it does not drive the gold away by careless fiat-money legislation.

154. Other influences affecting the rate of exchange. — We have discussed the situation as though the rate of exchange were affected only by the balance of exports and imports. It is, however, affected by all influences which occasion international payment. For example, in Europe in normal times American tourists spend perhaps two hundred million dollars yearly. They carry with them letters of exchange which they present to European banks for payment. If these transactions were isolated and kept to themselves, they would call for the shipment of two hundred million dollars in gold to Europe but they are lumped with other international payments which, on the whole, balance all payments made in this country. In the first half of the last century when merchant vessels were constructed of wood these vessels were owned extensively by the United States, with the result that there was a large balance of payments for ocean traffic made from Europe to America. At the present time the merchant marine is owned largely in Europe and there is a considerable balance of freight charges to be paid there by this country. In other days, when Europeans were making large investments in this country, that is, when we were borrowing from Europe, there was a large demand for specie to move in this direction. As time went on our interest obligations to Europe increased until our interest payment to Europe amounted yearly to more than the yearly investment from Europe. This gave rise to the need of sending exchange in the other direction. During the last quarter of a century our foreign exchanges have been

influenced by the fact that great numbers of immigrants have come to this country, have lived sparingly, and have sent their surplus earnings to their relatives in Europe, often for the purpose of inducing these to emigrate also. It was estimated some time ago that the amount of foreign payments made by these immigrants amounted to one hundred and fifty million dollars a year. These and other influences which occasion international payment must be balanced against one another in order to arrive at the rate of foreign exchange.

QUESTIONS

1. What is the origin of the expression "favorable balance of trade"?
2. How will a Chicago debtor ordinarily cancel a New York debt? How will various deposit accounts be affected thereby?
3. What is a foreign bill of exchange?
4. What is the value of an English sovereign in American money? Does this value fluctuate? Does the amount of money which a person in New York must pay to cancel a debt of one thousand pounds in London fluctuate? Normally between what points?
5. How do financial bills of exchange differ from commercial bills of exchange?
6. Illustrate the fact that the rate of exchange between two countries is affected not alone by the balance of payments between those two countries but also by the commercial relations of these countries with other countries.
7. What tendencies are at work to keep a country from having too much or too little gold?
8. Name the principal influences other than the balance of trade which affect the rate of exchange.

SUPPLEMENTARY READING

- DEVAS, *Political Economy*, Chap. ix.
JOHNSON, *Introductory Economics*, Chap. xviii.
JOHNSON, *Money and Credit*, Chap. v.
SEAGER, *Principles*, Chap. xxi.
TAUSSIG, *Principles*, Chaps. xxxii. and xxxiii.
WALKER, *Political Economy*, Part III., Chap. ii.

CHAPTER XIII

INTERNATIONAL TRADE

155. Causes of international trade. — International trade is trade carried on between the inhabitants of different countries and is due to the same causes as domestic trade; that is, trade carried on within a country. Exchanges may be carried on between two localities in the same country because the two localities are differently endowed by nature. One locality may contain mineral deposits, for instance, and the other locality may be especially adapted for agricultural production. It will, therefore, be to the interest of both localities to exchange, inasmuch as both localities may need the minerals and the agricultural produce, whereas the agricultural community cannot produce the minerals at all, and the mining community can perhaps produce the agricultural produce only with great difficulty.

The situation is not changed if the mining community happens to be in one country and the agricultural community in another. Thus, for example, tin is mined in Wales and not in the United States. On the other hand, the United States can produce wheat at much less cost than can the Welsh. For this reason an exchange of wheat and tin between Wales and the United States may be found desirable. An exchange of tropical products for those of the temperate zone will be found advantageous for the same reason. Bananas might be produced in the United States under glass covers, but such production would be at a great disadvantage. On the other hand, many products of the United States cannot

be conveniently produced in the tropics. It will, therefore, often be found convenient and desirable to carry on an exchange of goods between the United States and tropical countries.

The exchanges already referred to rest on natural differences in two localities but in a second class of instances exchanges may be carried on profitably where nature has not made a distinction in its endowment of the two localities. Thus, for instance, the manufacture of cotton goods may have grown up in one city, and the manufacture of woolen goods in another, and an exchange of the two commodities may be carried on between the two communities. The exchange here rests not on any natural advantage but on the fact that the industries have grown up in the respective places and that each place produces its kind of goods more cheaply. Exchange may be carried on advantageously between these two places whether they are both in the same country or in different countries. The exchange rests on the fact that each type of goods is produced more cheaply in its own place. In a third instance, it may be that both goods are produced more cheaply in one of the localities than in the other and yet that an exchange may take place between the two localities. Suppose, for example, that the goods *A* and *B* are both produced more cheaply in country *X* than in country *Y* but that the difference in the cost of producing the two goods is greater in one country than in the other, so that while country *X* produces *A* more cheaply than country *Y* can produce it, country *X* produces *B* very much more cheaply than country *Y* can produce it. In this case, country *X* will produce *B* and country *Y* will produce *A* and a satisfactory exchange of the two articles will take place between the two countries. Although *X* can produce *A* absolutely more cheaply than *Y* can, it has such a relative advantage in producing *B* that it will pay it to expend all of

its energies upon the production of *B* and to secure its supply of *A* from country *Y*.

156. Restrictions on international trade. — A century and more ago there was a common belief in Europe that a favorable balance of trade, that is, a condition where the exports of a country exceeded the imports, was a good thing because the balance must be made up in specie; that is, in gold and silver. Bounties of various kinds were given as inducements to export goods and restrictions were placed upon imports so as to discourage them and to secure an import of gold and silver. The navigation laws of England were formed upon this general principle and the irritation caused by them did much towards stirring up the spirit of revolt in the American colonies. Nowadays, it is generally recognized that a country will naturally get as much money as it needs in the course of international trade and that it is not necessary to take extraordinary pains to secure it. Restrictions are to-day placed upon international trade usually in the form of taxes on exports or imports. The Constitution of the United States forbids the taxing of exports by this country. Taxes on imports may be levied for the purpose of securing revenue for the government or they may be levied for the purpose of developing home industries. We speak of a tax of the former kind as a tariff for revenue only and a tax of the latter kind as a tariff for protection or a protective tariff. Where no tax at all is levied on exports or imports we have a condition of free trade. Where a few commodities are taxed for revenue only the condition is sometimes spoken of as one of free trade.

157. The argument for protection. — A great variety of arguments have been advanced to show that a protective tariff, that is, a duty upon imports so high as to discourage to some extent the importation of the goods so taxed, is beneficial to a country. We can here consider only a few of these arguments. We may enumerate, first, the balance of trade

argument, second, the home market argument, third, the infant industry argument, fourth, the wages argument, and fifth, the diversified industries argument.

The *balance of trade* argument was the argument of the old mercantile school. It is no longer of good repute, although it is sometimes still used. According to the balance of trade argument a nation must restrict imports in order to secure enough gold and silver to satisfy its needs. In answer to this it may be said that under modern commercial conditions, as has been shown in the last chapter, each nation tends to get and to keep the amount of gold which it needs under conditions of freedom of trade. Moreover, exports may exceed imports without the difference being paid in gold, for it is balance of payments rather than balance of trade which determines in which direction gold shall be shipped. Moreover, if a nation should continue to receive gold indefinitely in exchange for its commodities, it would not be improving in well-being. After a country has secured enough gold to do its money work it is not benefited by the presence of more gold obtained at the cost of other commodities which must be shipped abroad.

According to the *home market argument*, it is desirable to build up manufacturing industries and cities in this country so as to furnish a market for home agricultural produce. The claim was made that as long as agricultural produce was shipped abroad only those varieties of things could be shipped which bear the cost of distant transportation. Quickly perishable commodities and those which were bulky or heavy in proportion to their value tended thus to be shut out from exchange and hence would not be produced. This would result in a specialization of agriculture to the detriment of the American farmer. This argument has been weakened considerably in recent decades by reduction in the cost of transportation and by improvement in facilities for preserving

perishable commodities. Still it is undoubtedly a benefit to the farmer to have a large market at home. The real question at issue, however, is whether in exchange for this market he does not pay excessively for the goods which he consumes. In other words, as a producer the home market argument should appeal to him. As a consumer, it may and often will happen that all of the advantages he has received as a producer will be taken away from him by the higher prices which he must pay.

According to the *infant industry argument*, it will often happen that an industry which would be amply able to sustain itself after it is once developed is unable to get a start because foreign competition is so keen that the native industries during the years of their infancy cannot compete with them. The proposal is made that in such cases as these the government foster such industries by a protective tariff until they are able to stand on their feet and compete on even terms with foreign products. The implication is that as soon as the infant industry has been developed into an adult the protective duty is to be removed. Another form of the infant industry argument declares that in the development of nations from the agricultural stage to the manufacturing stage the nations which first arrive at the manufacturing stage have an advantage over the agricultural nations and are able to prevent the latter from developing as rapidly as they would develop if the competition were absent. In order to permit this development of the backward nations a protective tariff is useful, it is held. With foreign competition restricted the nation will be able to develop normally. When it has taken its place as an industrial nation protection should cease.

The *wages argument* varies in different countries. In countries where wages are high, as for example in the United States, it is argued that there should be a protective tariff

so as to protect the industries of the country from cheap foreign labor. In countries where wages are low it is argued that there should be protection to protect the poorly paid wage earners from more efficient wage earners of competing countries. Those who advance this argument fail to realize that labor costs may be the same where high wages are paid as where low wages are paid because of the greater efficiency of the more highly paid laborers. The more highly paid worker may produce more in proportion to his pay and therefore the costs may be the same where wages are high as where they are low. At the present time it is argued that the high wages of the United States are due to the protective tariff, but in the earlier history of the United States when the effort was being made to introduce a protective system and when wages were already high without protection it was argued that we must adopt a protective system not to make wages high but to keep them high.

It is argued that a country with *diversified industry* is better off than a country whose industries are specialized, for the reason that the country of specialized industries is too dependent upon the foreign markets both for its sales and for its purchases. Thus German protectionists have argued that it would be a mistake for Germany to neglect her agriculture, that a duty on agricultural products ought to be maintained so that the country would be able to support itself in case of war. Moreover, it is explained that where a nation depends upon its manufactures for a livelihood and its manufactured goods are shipped abroad to less developed countries, as soon as these less developed countries develop industries of their own, the market will be closed to them and then the country will have to depend upon its own resources. If it has neglected its agriculture, it will then face the problem of finding a home market for its manufactured products and food for its citizens.

158. The case for free trade. — The general argument in favor of freedom of international trade is the argument in favor of division of labor. The man who does one thing, and does that well, and exchanges his products for the products of other specialists will have more and better things than the man who insists on doing everything for himself. Specialization means exchange and normally the exchanges are profitable for both parties to the transaction. This does not cease to be true because a political boundary line happens to separate the two exchangers. Brown who lives in England and Smith who lives in this country exchange goods because they consider the exchange mutually profitable. If either of them believed he was the loser by exchanging, he would not exchange. The men who engage in international trade are intelligent and keenly alive to their own interests. It is not necessary for the government to make laws restricting exchange of goods so as to protect them from loss. As soon as it appears that a particular kind of trade will result in loss for either party, that kind of trade will cease.

159. The conclusion. — There is much merit in the general argument in favor of freedom of trade. It shows a lack of logic to spend immense sums digging canals and building railroads and developing steamships to facilitate commerce between nations and at the same time to levy prohibitive restrictions upon that international trade for the purpose of stopping it. Still the free trade argument is in need of some modifications. The persons who carry on international trade do so for profit, and no doubt they would cease to do so if it involved loss to them; but their interests are not necessarily the interests of the nation and sometimes their interests run counter to the interests of the nation. This will be found true in those cases referred to in connection with the infant industry argument for protection where industries would be able to take care of themselves if only they were permitted

to get a start. The importers have no special interest in developing these infant industries and here their interests are against the interests of the nation. To this extent the infant industry argument is justified. But there is always danger that industries will be singled out for protection that will not ultimately be able to stand on their own feet without protection, and hence that it will always be uneconomical to conduct in the country. Moreover, even where the proper industries are selected for protection, it will usually be found impossible to remove the protection after the period of infancy is past. These considerations are not arguments against the development of infant industries by protection but against the abuse of protection for that purpose.

160. The protective tariff in the United States. — After the war for independence from England, trade jealousies and restrictions among the colonies proved such a nuisance that when the Constitution was adopted the power to levy duties on interstate trade was taken from the states. The first United States tariff act was passed in 1789 under the influence of Alexander Hamilton. This provided for a general duty of 5 per cent on imports except for a few commodities which were more highly taxed. Preceding and during the War of 1812 manufacturing industries were developed in this country because of the difficulties of carrying on trade with Europe. After the War of 1812 English manufacturers began dumping their surplus products here at such low prices as to threaten the existence of American manufactures. To guard against this, the first general protective tariff was passed in 1816 with rates of about 30 per cent on textiles. These duties were increased in 1824 and 1828 but in 1833 provision was made for gradual reductions. From 1846 to the Civil War the duty on imports was on a tariff for revenue basis. Since the Civil War we have, with an occasional setback, gradually increased our general average

of tariff duties until the climax was reached in the Dingley Act of 1897. The Payne-Aldrich tariff of 1909 made slight reductions from the Dingley tariff rates, and the Underwood tariff of 1913, which is still in force, represents a strong reaction from the extreme of protection but is still definitely a tariff for protection.

QUESTIONS

1. Why does not the United States produce all of the things which it needs? If it did produce all that could possibly be produced for itself, how would this affect its exports?

2. Show that it will sometimes pay for one country to import from another country goods which can be produced absolutely cheaper in the first country than in the second.

3. Has congress the power to levy duties on exports? Why? What is meant by a tariff for revenue? By a protective tariff?

4. State and discuss the merits of the balance of trade argument for a protective tariff. The home market argument. The infant industry argument. The wages argument. The diversified industries argument.

5. What is the general argument for freedom of international trade?

6. What is the conclusion in the text as to the merits of a protective tariff policy?

SUPPLEMENTARY READING

ELY, *Outlines*, Chap. xviii.

JOHNSON, *Introductory Economics*, Chap. xix.

SEAGER, *Principles*, Chap. xxii.

SELIGMAN, *Principles*, Chap. xxxii.

TAUSSIG, *Principles*, Chaps. xxxv.-xxxvii.

WALKER, *Political Economy*, Part IV, Chap. xvii.

DISTRIBUTION

CHAPTER XIV

THE DISTRIBUTION OF WEALTH

161. The meaning of distribution of wealth. — Under the head of consumption was treated the using or the utilization of economic goods. Under production was treated the bringing into being of economic goods, or the creation of utilities in economic goods. Under exchange, as we have just seen, the central theme was the valuation of economic goods, and now under distribution, the fourth of these large divisions into which for convenience of treatment we have divided the field of economics, we shall discuss the sharing of economic goods or the division of economic goods among those who have helped to produce them.

The term distribution is sometimes used also to indicate the transportation of goods to the localities where they are to be used. In this book the term distribution is not used in this sense. The transportation of goods, economically considered, falls under the head of production and not under that of distribution.

162. The shares in distribution. — We have already taken account of the four factors in production, namely, land, labor, capital, and business enterprise. Those who possess or control these factors are in a position which permits them to make a claim and to enforce the claim for a share of the goods which are produced. The share which the landlord receives by virtue of his ownership of the land is rent. The share which the laborer receives because of the contribution of his labor is wages. The share which the capitalist receives

because of his control of capital is interest. And the share which goes to the employer or enterpriser because he has undertaken the enterprise is profit.

163. The real income. — Rent and wages and interest and profit are usually paid to the sharers in the distribution of wealth in the form of money, or of purchasing power which is equivalent to money. But the *real income* consists not of money nor of purchasing power but of the goods which have been produced and which are to be divided among those who have an economic claim to them. The real income consists of things to eat and wear and of such things as houses and carriages and music and lectures and textbooks and sermons. These are the things that are to be divided in the distribution of wealth. But although the various producers are paid finally in bread and clothes and songs and books and sermons, they are not furnished these things directly, but instead they are paid in money for their contribution to the productive process. And they take this money income to the market and procure with it the real income in the form of bread and clothes and songs and books and sermons.

164. The stream of income. — It will help us to a clearer view of the meaning of distribution if we think of the real income to be distributed as a stream or flow which is constantly being produced by the agents of production and which is being divided as rapidly as it is produced.

It will aid in this conception of distribution to think of production as a river whose waters are the goods in process of preparation for consumption. From some of the headwaters of this economic river the mineral ores are secured; from other headwaters come timber and the products of agriculture. The forces driving the waters of this economic river down the valley represent the physical and chemical and vital forces of nature which aid, under man's direction,

in the production of goods. As the raw products from the headwaters move slowly down the stream they are wrought into new forms by the forces of production. After various transformations the waters of the river; that is, the economic goods, reach the point where they are ready to minister to human wants. At this point in the stream the results of production become the real income of distribution. At the point of distribution let us imagine the river divided into four channels, called rent and wages and interest and profits. These four channels do not lead the waters of the economic river to the sea, but instead we shall imagine them each immediately divided into innumerable flumes, such as are seen in an irrigated country. Each of these flumes brings a constant supply of real income to some individual laborer or landlord, or capitalist or enterpriser. And if an individual happens to be not only a laborer but also a capitalist and possibly a landlord, and enterpriser as well, he will receive his income stream not from one flume alone but from two or three or four flumes. And when the individual consumers have abstracted the satisfactions from the materials in which they are embodied, these materials are evaporated as is the water on an irrigated ranch and they finally find themselves back at the headwaters of the river, ready once more to come down the stream and to embody the satisfactions which consumers need.

To carry the analogy with irrigation one stage further, the various recipients of real income are for the most part dissatisfied with the volume of income that comes through their flumes. Each is struggling to increase his own income stream with the result that there is a constant fluctuation in the amount that goes into the various flumes. And sometimes the possessors of neighboring flumes organize and by coöperative effort succeed in getting for themselves a larger share of the contents of their channel than they have

received before. And sometimes their organization is so powerful as to compel a widening of their main channel with a consequent increase of flow into this channel and decrease of flow into the other three main channels.

165. Distribution and exchange. — Leaving aside for a moment our figurative distribution, let us consider the relation of exchange to distribution. In the independent household economy where each family was self-sufficient there was no exchange. Production was for direct consumption. But as soon as a division of trades occurred where one man made shoes which he sold in the market and another made bread and another made houses and another produced wheat, the bread and shoes and houses and wheat were distributed in the proportions in which they were exchanged; that is, each of the producers got the share of the total product which was represented by the relative exchange value of his product in the market. These relative exchange values depended upon conditions of demand and supply. If one of the producers was inordinately selfish and asked too much for his product, producers from other fields would enter his trade and bring prices down to a reasonable level. If one of the producers was neglectful of his interests and offered his goods too cheap, the purchasers would compete with one another to secure them and would drive their prices up to a reasonable level.

Under modern conditions of production where the typical producer does not make a complete product himself, which he may sell in the market, but instead coöperates with others in producing a good, this close relation between distribution and exchange is obscured; but there still remains the influence of supply and demand in assigning to him his money income. The typical producer to-day, whether he be landlord or capitalist or laborer, sells the economic service which he controls to the employer, who combines it with other services. His real income depends upon the money income

which he can get in exchange for his services and upon the amount of goods which he can get in the market in exchange for his money income.

166. The problems of distribution. — The first problem with regard to distribution is to find out what are the facts in the case and what are the forces at work tending to make the division what it is. In other words, when the stream of income is divided up into the four channels of rent and interest and wages and profits, why are the dividing lines which separate the channels from one another placed where they are? Why does not rent receive a greater share of income than it does at present, and interest a less share, or vice versa? Is the division made by accident or is it the result of forces which can be observed and measured? What are these forces? The same questions may be asked for the individual flumes leading away from the four main channels. Is this division, too, the result of accident or does it represent the working of economic forces? And if the latter, what forces?

The second large inquiry in connection with distribution has to do with the justice of the division. Is the sharing of the income stream among the producers a fair one? If not, is a fairer distribution possible? And if possible, what are the best means to secure this fairer distribution? In this elementary treatise we shall be able only to answer the first problem in a general way and we shall not attempt to do more than to suggest the answer to the second.

167. The principle of distribution. — Various attempts have been made to show why the shares in distribution are what they are, and not something else. Sometimes an attempt is made to establish a different regulating principle for each of the shares and to show that the amount of the product which goes as rent is fixed by one cause and the amount which goes as wages is fixed by another and inde-

pendent cause, and so on for the four shares. At other times the effort has been made to show that there is one general cause working throughout the field of distribution, fixing and determining each of the shares. In the following pages the view will be maintained that there is one general principle according to which the division into the four shares is made. This general principle represents, of course, only large general tendencies. There are many interfering causes at work which prevent the tendencies represented by this principle from being worked out in detail, but in a large way it does actually govern in the fixing of the shares in distribution. This governing principle is that of distribution according to marginal productivity. According to this general principle of distribution the possessor of a unit of any of the factors in production, namely, land, labor, capital, and enterprise, *tends to get as income the marginal product of that unit.*

168. What the principle of distribution according to marginal productivity does not mean. — When we say that the possessor of a unit of any factor in production tends to get for the use of that factor its marginal product, we do not mean that he gets exactly the marginal product. It will usually happen that there are countervailing forces which prevent this tendency from working out to a nicety. But the tendency is in general so strong that it may be considered the large principle according to which the division is made. When we say that the possessor of a unit tends to get its marginal product, we do not mean to say that he tends to get the actual product of some other unit than his own, for example, of some less efficient unit which is marginal in the sense that it would be the first unit to be thrown away if some unit were to be displaced. He tends to get the marginal product of his own unit of the factor. When we say that the owner of each unit tends to get the marginal product of that

unit, we do not mean to imply that it is possible to take the physical products which have been made by the combined efforts of land and labor and capital and organizing skill, and to say just what parts of these physical products have been produced by a unit of land or by a unit of labor or by a unit of capital or by a unit of organizing ability.

169. What the principle of distribution according to marginal productivity does mean. — When we say that the owner of a unit of one of the factors tends to get the marginal product of that unit, we think of the unit as a relatively small part of the whole supply of the factor. The smaller the unit in proportion to the whole supply, the more accurately will the tendency be realized. When we say that the owner of a unit of a factor tends to get its marginal product, we mean that he tends to get the difference between the total product under normal conditions of production and what is produced under conditions which are normal except for the fact that the one unit of the factor in question is not being employed in production. We mean then by the marginal product of this unit that this particular unit is just at the margin of being employed. Sometimes it is employed and at other times it is not employed, all of the other factors remaining the same. The marginal product is the amount which we impute to this unit of factor because it is produced when the unit is employed and it is not produced when the unit is not employed.

170. The marginal product and the law of diminishing returns. — If the student will recall the law of diminishing returns, he will remember that with a given supply of land and capital and organizing skill the application of ten units of labor might result in a product of, let us say, fifty bushels, and with an application of eleven units of labor of exactly the same quality and with no changes in the methods of cultivation the product might be not fifty-five but fifty-

four bushels. And with an application of twelve units of labor and without any changes in the other elements the amount produced might be fifty-seven bushels. At first sight it might look as though the product of the eleventh unit of labor was four bushels and the product of the twelfth unit was three bushels. This, however, is not the fact. The twelve units are, by hypothesis, all equally efficient and therefore one produces just as much as another. We may, however, say that the marginal product of the twelfth unit of labor is three bushels. By this expression we do not mean that the actual physical product of a unit of labor is three bushels, but merely that under the conditions of production which are normal for the enterprise when a unit of the labor is withdrawn from the enterprise we suffer a loss of three bushels in total product. If all of the units of labor are equally efficient, then the marginal product of each unit is three bushels for the reason that it does not make any difference which unit of labor is withdrawn from the productive process. In any case, the result will be a diminution of the total product by three bushels. If the units of labor are of different efficiencies, then the marginal product of any particular unit is ascertained by removing that particular unit from the productive process. When marginal productivity is understood in this technical sense, the statement that the laborer tends to get his marginal product will be subjected to less criticism than it otherwise is.

Or, consider the law of diminishing returns as it applies where the amounts of capital and labor and organizing skill remain constant and where the amount of land is changed. Suppose that normally with a given supply of capital and labor and managing ability and with five hundred acres of land, the resulting product is five thousand bushels, or at the rate of ten bushels to the acre. Suppose, now, that without changing the capital and labor and managing skill, one acre

of land is added to the business enterprise. Let us say that the product is now not five thousand and ten bushels but five thousand and nine bushels. And suppose that when we add still another acre, making five hundred and two acres, and do not change any of the other factors, the total product is five thousand and seventeen bushels, although the last acre added is, by hypothesis, just as good as any other acre. If the working presence of the five hundred and second acre in the business enterprise has added only eight bushels, we may say that its marginal product is eight bushels. But when there are five hundred and two acres cultivated in this form the marginal product of any one of the acres is eight bushels, provided that they are equally productive. The removal of any one of the acres would result in a decrease of eight bushels. The same kind of reasoning may be applied where capital is the changing factor. Thus the law of diminishing returns will be found to furnish the key to the meaning of marginal productivity.

171. A simplified illustration. — In the following chapters the principle of distribution according to marginal productivity, as it affects the different factors, will be considered in detail. In this preliminary chapter we shall consider the principle in its most general outlines; and to make this consideration as clear as possible we shall make certain assumptions which will have the effects of removing some of the superimposed detail and of laying the principle itself open to plainer view.

To simplify our illustration as much as possible, let us assume a community with a definite supply of land and labor and capital and organizing skill. Let us assume further that all the acres of land are equally productive; that all the laborers are of like efficiency; that there is no difference in the productive capacities of different units of capital of equal amount; and that all employers are equally

capable. Suppose, further, that there is keen competition among the possessors of the several factors. With these assumptions made it is clear that there is one best combination of land and labor and capital and management, and that combination is found when all of the factors are completely employed. Let us assume, then, that this proportion of employment of factors has been arrived at. The question now arises, how will the product be shared among the producers? And the answer is, each producer will receive his marginal product. For if it were not so, let us see what would happen.

Suppose that the laborers were not receiving their marginal product. This would mean that one of the laborers, any one of them, if he quit working for his employer, would cause a loss to his employer of an appreciable amount in addition to his wages. On the other hand, if this employee hired himself to some other employer, he would increase the output of that employer by an amount greater than the wages which he had been receiving. Since we have assumed perfect competition among enterprisers as well as among laborers, as long as any employer sees that he can take an employee away from some other employer and have him produce more than his wages he will try to hire him. On the other hand, when an employer sees some other employer hiring his laborers away from him he will realize that for every additional laborer taken away from him he suffers more than a proportionate loss. Thus, if he loses two laborers, he suffers more than twice as much loss as if he loses one laborer; if he loses four laborers, his loss is more than twice as much as if he loses only two laborers, and so on. While the loss of a single laborer might be a trifling matter to him, he cannot afford to have many laborers taken away from him, and therefore he enters into the competition to retain his laborers. But the only means by which he can retain them

is to raise their wages. He can afford to bid his wages up to the point where each laborer gets his marginal product rather than to see any considerable number of them leave his employment.

On the other hand, the enterprisers who are trying to take his laborers away from him can afford to bid wages up to the point where the last laborer hired just adds to the total product the amount of his wages, but they cannot afford to bid wages up any higher than this for the reason that every man hired who is paid more than is added by his working presence represents a loss to the business. Clearly, then, the competition between enterprisers, both those who desire to take laborers away from other enterprisers and those who desire to retain their labor, will have the effect of giving to the laborer his marginal product.

The rent of land will be arrived at in a similar fashion. We have assumed that all of the acres are of equal productivity. If any enterpriser pays for the use of an acre of land appreciably less than the marginal product of the acre; that is, less than the difference between what his total product is when that acre is being used and what it is when that acre is not being used, he is making an appreciable profit out of it, and some competing enterpriser who is aware of this profit will attempt to secure a part of it for himself by securing this acre at the same or a slightly higher rental. If the first enterpriser loses not only this acre but other acres to other enterprisers, he suffers more than a proportionate loss, for the reason that a loss of two acres means more than twice as much to him as the loss of one acre, and the loss of four acres means more than twice as much as the loss of two acres, and so forth. In order, therefore, to avoid suffering this loss, he will compete to hold his proportionate share of the acres, and he can do this only by paying more rent. On the other hand, the other enterprisers who desire more acres

will continue to compete for them up to the point where they see no gain in continuing further. This point will be reached when in the enterprise the loss in product sustained by subtracting just one acre from the business is equivalent to the rent of that acre. Competition then will tend to secure for each land owner the marginal product of a unit of his land.

Similarly, in the case of capital, if any capitalist is receiving for his capital appreciably less than the marginal product of a unit of it as interest, it will pay some enterpriser to borrow this capital at the same or a slightly higher rate of interest. And while the former borrower realizes that the loss of one unit of capital will make only a slight difference to him, he realizes also that if he loses the use of additional capital, he suffers an accelerated and cumulative loss. For the loss of two units of capital means more than twice as much to him as the loss of one unit, and a loss of four units means more than twice as much to him as the loss of two units, and so forth. He therefore will compete with other enterprisers to retain his capital and will offer a higher rate of interest for it up to the point where he would suffer loss by giving more.

On the other hand, the other enterprisers will compete for the capital and will increase the rate of interest up to the point where if they increase the rate of interest any more, the use of the capital will cost them more than it brings to them. In other words, it will represent a loss to them. This point is the point where the unit of capital just gets its marginal product as interest. But the employer who already has the use of the unit of capital and the other enterprisers who desire to take it away from him will therefore compete for the capital until they force its rate of remuneration, — that is, its interest, — up to the point where its owner gets its marginal product for it.

In a similar manner the enterpriser gets his marginal product. It is evident that the better the management is, the larger will be the total product. We have assumed that all of the enterprisers are equally efficient. If now any one enterpriser withdraws from production and, by hypothesis, no one takes his place because the supply of enterprisers is limited, the total product of industry will be lessened. The marginal product of land and of labor and of capital will be lowered and the landlord and the laborer and the capitalist will receive less interest and wages and rent. Any enterpriser, therefore, under our hypothesis, is able to make terms with capitalists and laborers and landlords which will insure to him a surplus equivalent to the difference between the total product when all enterprisers are producing, and the total product when all enterprisers except one are producing. A competition of laborers and landlords and capitalists, therefore, will tend to give each enterpriser his marginal product, because if any enterpriser threatens to withdraw from production because he cannot make agreements with landlords and laborers and capitalists which will secure to him his marginal product, other enterprisers will be enabled to lower the rates of rent and interest and wages, and capitalists and laborers and landlords will gladly come to this employer who is at the point of withdrawing and give to him the use of land and labor and capital at rates which will permit him to receive his marginal product.

In this illustration, by hypothesis, there is no fluctuation in the amounts of the various factors. This will tend to establish an equilibrium of economic forces and to standardize the incomes of enterprisers. Under these conditions there will be absent certain elements in the reward of enterprisers which are present under other conditions, as for instance where there are constant fluctuations in the supply of capital and labor, and where it becomes the task of the enterprisers

to estimate the extent of the changes which must be made in the combination of the different factors. When the incomes of enterprisers have become standardized through the establishment of an equilibrium of economic forces, their incomes, which are determined according to the principle of marginal productivity, are more nearly allied to wages than to the profits which come as a recompense for risk undertaken. This standardized income of enterprisers may therefore be, and often is, spoken of as wages of management. It is classed by some economists as wages rather than as profits. Other elements of the enterpriser's income than wages of management will be considered in the next chapter.

172. The substitution of factors. — It is not at all to be supposed that according to the marginal productivity theory of distribution the reward of each factor is settled independently of the reward of other factors. On the contrary, there is a very close correlation between the rewards and the services of the different factors. This is so because the different units of each factor compete for employment not only among themselves but also with the other factors. Thus the enterpriser, in making up his mind in what proportion to combine the land and labor and capital, may be undecided as to whether he should pay out a final one hundred dollars for the use of an additional tract of land or as wages to additional laborers or as interest for the use of additional capital. In arriving at a conclusion as to the most profitable manner in which to spend the final outlay he will consider whether the total product will be more increased by the addition of the land in question or of the labor or of the capital, and he will make the expenditure for the use of the factor which will bring to him the largest return. The constant substitution of factors for one another at this margin of indifference will tend to keep the rewards of the different factors in close relation to the services of the different factors.

QUESTIONS

1. What is meant by the distribution of wealth?
2. Name the shares in distribution. To whom does each of these shares go?
3. Of what does the real income as distinguished from the money income consist?
4. Make use of the illustration of the division of a stream of water to show how the income stream is divided.
5. Show that the forces regulating exchange are also forces influencing distribution.
6. Explain the nature of the problems of distribution.
7. State the general principle of distribution according to marginal productivity.
8. Does the marginal productivity theory of distribution assert that the owner of each unit of a factor in production gets the actual product of that unit? Explain.
9. What is meant by the marginal product of a unit of a factor in production?
10. What is the relation of the law of diminishing returns to the problem of marginal productivity? Illustrate by examples.
11. According to the marginal productivity theory of distribution, is the reward of each of the factors determined independently of the rewards of the other factors? Give a reason for your answer.

SUPPLEMENTARY READING

- CARVER, *Distribution of Wealth*, Chap. iii.
CLARK, *Distribution of Wealth*, Chaps. ii.-vi.
DEVAS, *Political Economy*, Book III, Chap. i.
ELY, *Outlines*, Chaps. xix. and xx.
MARSHALL, *Principles*, Book VI., Chaps. i. and ii.
SEAGER, *Principles*, Chap. xi.

CHAPTER XV

BUSINESS PROFITS AND RENT

A. BUSINESS PROFITS

173. The meaning of profits. — In the general discussion of distribution in the preceding chapter it was shown that the enterpriser tends to get his marginal product; but in that discussion certain assumptions were made which require that a supplemental treatment be accorded to the share which the enterpriser receives. It was assumed for the purposes of the preliminary investigation that all enterprisers were equally efficient and that the supply of the several factors in production was constant. Furthermore, it was assumed that under the influence of competition the rewards of the different factors would settle down to a condition of stability and that the price fluctuations of the business world of to-day would be absent. But the actual business world is a world of change rather than a world of stability; or perhaps it would be more accurate to say that it is an essentially stable world which gives the impression of changeableness because of fluctuations in its contour. In this respect it resembles a lake which when considered as a whole is a level body of water, but when closer attention is directed to any particular part of its surface it is seen to be in a constant state of agitation. The analogous agitation in the business world, represented by price fluctuations, gives rise to an income for the enterpriser in addition to that discussed in the previous chapter.

In the popular sense the profit of the enterpriser is the

difference between what he gets for the commodity or service in which he deals and what he has paid for it. Several elements, however, will have to be subtracted from profit in this broader sense before we arrive at profits in the sense in which the economist uses the term. In the first place, the enterpriser often furnishes a part or all of the capital which is employed in the business. But the economist calls the returns which go to the owner of the capital, because of the part which capital plays in production, interest. And he calls it interest whether the capitalist lets out capital to some one else or uses it himself in his own business. Interest, therefore, on the capital which the enterpriser has invested in his business and which belongs to himself will have to be deducted from profits in the broader sense before we have profits in the sense in which the economist understands the term.

The economist calls the income which goes to the landowner for the use of the land, rent. If the enterpriser secures the use of the land from some one else, he pays the rent as one of the expenses of production. If he uses his own land, rent must be subtracted from the gross profits before we have profits as the economist understands the term. And where the enterpriser's machinery or other capital is breaking down or wearing out, a depreciation fund must be set aside for the replacement of the capital before profits can be counted.

After the above deductions are made from gross profits there is left for the enterpriser his marginal product as explained in the preceding chapter together with an income which is due to price fluctuations. Where the enterpriser is a monopolist there is also a part of his income due to his ability to raise the price of his product through a restriction of output. These three elements of the enterpriser's income may be called respectively wages of management, competitive profits, and monopoly profits.

174. The sources of profits. — Profits are the difference between the selling price and the cost to the enterpriser, this cost including wages paid to his employees, interest, rent, and upkeep. If there were no variations in the demand for goods, and if the supply of the agents remained constant with no changes in methods of production, managing an enterprise would soon be a very simple matter. Persons of ordinary intelligence would soon learn the conditions of production, and there would be so many persons willing and able to be enterprisers that the enterprisers would receive wages of management but not competitive or monopoly profits. But business conditions are far from being in this static condition. Prices do not remain constant. The amount of labor and capital is constantly varying; new lands are being opened to cultivation; new methods of production are constantly being adopted. In many lines of business the enterpriser who was considered progressive ten years ago would be left hopelessly behind in the race for business if he tried to use the methods of that time today. Out of these competitive and changing conditions arise competitive profits or losses for enterprise. Another source of profits is monopoly. We shall now consider competitive profits and monopoly profits.

175. Competitive profits. — In any kind of undertaking the enterprisers are likely to vary greatly in their talent for conducting business. Their profits are equal to the difference between their selling price and their cost price. For some enterprisers this difference is much and for others it is little or nothing. If we speak of the enterpriser whose costs just equal his selling price, as the marginal enterpriser, we shall be in a position to explain the profits of those enterprisers who have a surplus above costs of production by comparing their methods of conducting their enterprise with that of the marginal enterpriser.

Possibly this marginal enterpriser has not combined the factors of land and labor and capital in the best proportion in view of the cost of the several factors. An enterpriser who makes a better combination of the factors than does our marginal enterpriser will reap an added reward over what the marginal enterpriser receives, because of his better management, provided that he manages his business in other respects as well as does the marginal enterpriser. Because this added reward is due to better management it is called wages of management. It is profit, but not competitive profit.

An enterpriser who conducted his business exactly as did the marginal enterpriser with the difference that he was a better bargainer and was able to secure labor and land and capital or any of these on better terms than other enterprisers could, would reap a surplus from the fact that he had outbargained the owners of the other factors. What under ordinary circumstances would go to others as rent and wages and interest he now appropriates to himself as profits by reason of his superior bargaining power. At a time when wages or interest or rent is increasing, an enterpriser may be able to secure the factors at the former low rate longer than do his competitors. Again, when these shares are decreasing, he may be able to secure a reduction of costs before his competitors do. In either case he thus obtains a wider margin between prices and costs than does the marginal producer, and so secures a profit.

Where the prices of the finished product or of the raw materials are constantly changing, the shrewd enterpriser who can forecast the changes can make the purchases in such a way as to obtain an advantage over other enterprisers. Thus, if he foresees an increase in the cost of some material which is important for his business, he can purchase a large supply while the prices are low and secure an advantage

over employers and enterprisers who had less foresight. If he foresees a rising price of his product, he can prepare for it by a larger production of goods and thus reap profit; or if he foresees a reduction of prices, he may curtail expenses by discharging employees and curtailing the volume of production.

The enterpriser also receives a reward because he assumes the risk of paying the shares of the other factors. The laborer, the capitalist, and the landlord have contracts with him under which they receive their reward whether the business is profitable or not, whereas the enterpriser's reward comes only when the business is successfully conducted and in the event of lack of success he is compelled to bear a loss. As a recompense for this liability to pay a loss, employers must, on the whole, receive a profit in excess of wages of management. Otherwise they would not be willing to undertake the risk attendant upon the management of business.

176. Monopoly profits. — In the case of competitive profits which we have just been discussing the far-seeing enterpriser was able to reap competitive profits from price fluctuations, although he was not able to regulate price because of the competition of other enterprisers. Where an enterpriser is free, or comparatively free, from the competition of other enterprisers and is able to control the supply of a commodity, he can, by limiting the supply, raise prices to a certain extent. When prices are raised in this way, the resulting increased margin between selling prices and the costs of production give rise to monopoly profits. As we have already learned, there is a limit beyond which the monopolists will not go in increasing prices for the reason that a further increase in prices would result in a lessening of total profits. Often, too, the enterpriser who is a monopolist is afraid that if he raises the price too high, a competitor will enter the field to contest his monopoly and attempt to secure some of the excessive profits. Moreover, as we have learned in an earlier

chapter, where the monopolist attempts to secure too high profits, consumers are likely in many cases to substitute other goods and thus to defeat the monopolist's purpose.

177. The capitalization of monopoly profits. — When an enterpriser is in possession of a secure monopoly which gives him large monopoly profits, he is often in a position to capitalize the monopoly profit and to sell out the business on such terms that he can receive an income as large as his monopoly income from the price which he receives for the business. Thus, in a community where safe investments bring regularly five per cent interest, suppose the case of a business in which there is an investment of a hundred thousand dollars in capital which gives a return of five thousand dollars in interest and fifteen thousand dollars in monopoly profits. If the monopoly is considered absolutely secure, it will not be hard to find purchasers who will be willing to give for the business four hundred thousand dollars; that is, they capitalize its ability to earn profits at three hundred thousand dollars and give one hundred thousand dollars for the capital which is already earning five thousand dollars a year. After the monopolist has sold his monopoly the purchasers do not consider the fifteen thousand dollars income per year as monopoly profits, but rather as interest upon their capital investment.

B. RENT

178. Rent defined. — Rent is the payment which is made for the use of land and other natural agents. Popularly, a clear distinction is not always made between rent and interest; thus, we sometimes speak of the income which a person receives for his investment in land as interest on his investment instead of calling it rent. Likewise, when we speak of the return which is made for the use of specific pieces of capi-

tal goods, we often refer to it as rent. Thus, we speak of rent for a house or a boat or a horse. But since we are going to distinguish between the income received by the owners of the land and that received by the owners of capital, it will be useful, instead of referring to these incomes indiscriminately as rent or interest, to call the one rent and the other interest. Economists have pretty generally adopted this custom referring to the income from land as rent and to the income from capital as interest.

179. Contract rent and economic rent.—Economic rent is not always the same thing as contract rent. A landlord may agree to let his tenant have the use of land for a smaller sum than competing renters would be willing to pay for the land in question. Here the sum actually paid, the contract rent, is not the economic rent. The economic rent is the competitive rent. Again, where there are buildings upon the land, the payment which the renter makes includes an element of interest. Here the economic rent is the difference between the contract rent and the interest on the improvements. Where the landlord uses his own land, we may say that the economic rent is the amount which would be paid for the use of the land if it were let under competitive conditions.

180. The distinction between land and capital.—Certain economists do not distinguish between land and capital. There is so much similarity between land and capital and between rent and interest that they classify land as a form of capital and consider rent as interest on landed capital. There are, however, certain good reasons for distinguishing between land and capital and giving land a separate treatment. For us the most important reason for the distinction arises from the fact that land is limited in quantity while it is possible to increase the quantity of most other forms of capital. This is especially true of agricultural land in the older

countries, although it is true that in all countries some land of poorer grade can be found which is not actually in cultivation, and also it is true that here and there the total amount of agricultural lands can be added to by filling up lakes and draining swamps. But, on the whole, the fact that land is limited in quantity gives rise to certain problems to which attention must be paid, problems which do not arise in connection with capital. The same reasoning applies to waterfalls and to mineral deposits. Their limited occurrence in nature makes it necessary that they be given different treatment from goods which can be reproduced at will.

While, therefore, we insist on the distinction between land and capital, we do not overlook the fact that there is a boundary line between the two where one merges into the other, and where it is difficult to say whether we should classify the particular good as land or as capital. For instance, this will be true where the owner of a lake goes to great expense to fill it up. This made-land has in many respects the economic appearance of capital. It is also true where capital in the form of manures for the land has been used upon the land and has improved the quality of the land that the returns from the capital can then be treated as returns from land. But this difficulty of finding just where the boundary line between land and capital is located is not a sufficient reason for failing to make a distinction between the two.

181. The cause of rent. — People pay for the use of land for the same reason that they pay for other things; namely, because of the utility and scarcity of the thing for which payment is made. If land were not useful, of course, no one would pay a rent for it, and even though it were useful if it were not scarce, that is, if any one could have as much as he wanted of it, it would not command a rent. There are still many places in our western states where land is so plentiful, or, to state it in another way, where the workers of land are so scarce that

the owners of the land cannot get any appreciable rent for it. Often this practically no-rent land is very fertile and if it were located in some of our populous states, it would yield its owner a large yearly rental. As our western states increase in population this land will undoubtedly command a considerable rent.

182. The measure of rent. — Whether we consider agricultural or grazing or forest land or land for any other purpose, there are tracts of different degrees of productiveness employed in producing for the same market. For example, in the case of agricultural production, there is usually found land of much fertility the products of which compete in the market with the products of land the fertility of which is so low or the location of which is so poor that the selling price of the products barely suffices to pay the necessary costs of production and leaves nothing over for rent. The English economist, Ricardo, writing early in the nineteenth century, explained that the rent of any particular piece of land is equal to the difference between the produce of that land and the produce of an equal area of land actually cultivated to supply the same market, but of such poor quality as not to command a rent.

To illustrate this principle, let us suppose a newly settled country where there is an abundance of fertile land as compared with the population. This fertile land, let us say, produces twenty-five bushels of wheat to the acre. There is also a large expanse of land of a second quality which yields under the same kind of cultivation twenty bushels, and there is still a third quality of land which yields fifteen bushels if similarly cultivated. The new settlers, relatively few in number, will cultivate only the land of the best quality (assuming that this land is not handicapped as compared with other lands by location, difficulty of cultivation, etc.). As there is land enough and to spare of the first quality, no

one thinks of paying a rent for its use, since if he were asked to do so, he would apply his labor to another tract of land of the first quality (assuming that all of the land owners have not entered into a conspiracy to monopolize the land). But as soon as population has so far increased as to make it necessary to cultivate second quality land, rent will commence on first quality land, because a cultivator of first quality land may no longer choose other first quality land when he is asked to pay rent, but if he makes a change, he must now go to second quality land. Since the same efforts will produce twenty-five bushels on the first quality land or twenty bushels on the second quality land, he can as profitably remain on first quality land and pay five bushels rent as move to the second quality land and get it rent free. In either case he will receive net twenty bushels per acre.

The use of the second quality land can be had without payment of rent for the same reason that in the earlier stage the use of the first quality land could be had on like conditions. There is a superabundance of it relatively to the need for it. It is still a free good. Population continues to grow and all of the second quality land is finally occupied. As the third quality land begins to be cultivated, although it can be had without the payment of rent, the second quality land begins to command a rent and the rental of the first quality land is further increased. This is so for the reason that it is now a matter of indifference to the cultivator whether he pays ten bushels an acre for the use of first quality land, five bushels an acre for the use of second quality land, or nothing for the use of third quality land. In any case, he has fifteen bushels an acre remaining to recompense him for the use of his capital and labor. From this illustration it will be seen that although differences in the qualities of land do not *cause* rent, such differences do serve to measure the amount of rent where there is no-rent land from which to measure and where such no-rent

land actually competes with the land whose rent is to be measured.

183. The importance of location. — In the illustration given above we have supposed all of the land to be of equally favorable location. If, however, it should happen to be the case that the land of the first quality was so poorly located with reference to the settlement that it cost the equivalent of three bushels an acre to get the crop to market, whereas the cost of getting the produce of the land of second and third qualities was practically nothing, this cost of bringing the produce of the first quality land to market would have to be deducted from its produce before estimating the rent. In this case, when the second quality land was no-rent land, the first quality land would command a rent, not of five bushels, but of five bushels less the three bushels which it cost to transport the produce, or two bushels. The rent of agricultural land, therefore, depends upon its location as well as upon its fertility. In the case of city lands, fertility counts for little or nothing, while location is almost entirely responsible in estimating the land's productivity.

184. Where no-rent land is absent. — It often happens that there is no actual no-rent land competing with the land whose rent it is desired to estimate. For instance, in the case of land used for building purposes in a city, the poorest land from the point of view of location is not no-rent land. It is more probably land for which an appreciable rent could be obtained for its use for garden purposes. In this case, to arrive at the rental of a given area we should need to measure the difference in productivity of the land whose rent we were estimating and the productivity of this poorest land for the purpose, and to add to this difference the rental of this poorest land for garden purposes.

185. Rent and the price of the product of land. — When the increasing population referred to in the preceding discus-

sion found that the wheat produced on first quality land would no longer supply their need for that commodity, they did not call a town meeting and resolve to cultivate second quality land. Instead of taking this political method of expressing their views of their needs, they adopted the economic method of offering a higher price for wheat. As soon as the price was sufficiently high to make it profitable, many persons were willing to produce wheat on the second quality land. We have seen that as soon as the second quality land became utilized a rent had to be paid for the first quality land. Rent did not begin at this point because of the employment of the second quality land; but rather the increase in the price of wheat caused both the beginning of rent on first quality land and the cultivation of second quality land. Again, the transition to third quality land was made in response to a further increase in price. Here, again, increase in price gives rise to rent. It may in general be said that rent is not a cause of increase in price; but, on the contrary, rent is caused by price increase.

This is a principle of much importance in economics and one which is often misunderstood by young students. A further elaboration of it may be, therefore, opportune. The price of wheat or of any other commodity is regulated by the principles of demand and supply, or of utility and scarcity. In our illustration the growing population caused an increase in demand for, or, in other words, a greater scarcity of, wheat, with the result that the price rose. The higher price made it possible for the owners of the better land to collect a rent for its use and it also made it possible for cultivators to make a living on land of poorer quality than that already in use.

186. Rent and the capital value of the land. — The price for which land will sell; that is, its capital value, is related to rent as effect to cause. Rent is the cause and the value of the land the effect. The value of the land is ascertained by

capitalizing the annual rental at the current rate of interest. Thus, if the annual rental of a farm is one thousand dollars and the current rate of interest in the community on investments similar in character to that in the land is 5 per cent, the value of the land is determined by capitalizing the one thousand dollars at 5 per cent. The result is twenty thousand dollars. If the land should become less productive because of loss of fertility, or increased difficulties of transportation of product, so that its rental is only five hundred dollars, and if the current rate of interest in the community on investments of this character remains the same, the value of the land will sink to ten thousand dollars. On the other hand, if the productivity of the land should become greater so that the owner receives yearly two thousand dollars in rent, the capital value of the land will now be forty thousand dollars.

A change in the rate of interest in the community has an effect on the value of the land opposite to that caused by a change in the yearly rental. Thus, if the yearly rental is a thousand dollars and the current rate of interest changes from 5 per cent to 4 per cent, the value of the land increases from twenty thousand dollars to twenty-five thousand dollars. If the current rate of interest increases from 5 per cent to 6 per cent, the capital value of the land drops from twenty thousand dollars to about sixteen thousand six hundred and sixty-six dollars. In this reckoning we assume in each case that the rental or the rate of interest assumed is expected by the buyer and seller to prevail for a long period of time.

187. The justification of rent taking. — In our illustration in a previous section we showed that the rent of land increases with the growth of population. The land has no value independently of the presence of the population. Certain reformers seizing upon this idea maintain that since rent is

the product of the growth of society, society should collect the rent. The land owner, they contend, does nothing for society except to collect the rent and this is of no advantage to society. If the rent were taken for the uses of society, it would relieve people from the necessity of paying taxes of various kinds and would permit the state to do many things for its citizens which it cannot do now for lack of funds. In answer to this contention it may be urged that under the custom of permitting owners to take rent the land has taken on a value and that many purchasers of land have paid considerable sums for the land and received a return equivalent to fair interest. To take from these owners the full amount of the rental would be to confiscate the entire capital value of the land. This would bring many hardships with it and it would constitute an injustice that the state cannot afford to indulge in. The situation, however, is different with regard to the future increase in value of the land. There is much to be said in favor of the state's taking a part or the whole of this future "unearned increment." The arguments against such a procedure on the part of the state have to do with its expediency rather than with its justice.

QUESTIONS

1. What is the popular meaning of the term "profit"? What elements must be deducted from profits in this sense in order to arrive at profits as the economist understands the term?
2. What are the sources of profits?
3. Is it socially desirable that the enterpriser receive profits as a regard for undertaking risks? Justify your answer.
4. What are the limits to monopoly profits?
5. What is meant by capitalizing monopoly profits?
6. What is rent?
7. Why do we distinguish between land and capital?
8. Why is rent paid for the use of land?
9. What was Ricardo's explanation of the measure of rent?

Are differences in the qualities of different pieces of land a *cause* of rent?

10. How does location affect the rent of land?

11. Where there is no no-rent land from which to measure, may we still think of rent as being measured by difference in productivity? Explain.

12. Is high rent of land a cause of high price of the product? Explain.

13. What is the relation between rent and the selling price of land?

14. Is rent-taking justifiable?

SUPPLEMENTARY READING

CARVER, *Distribution of Wealth*, Chaps. v. and vii.

ELY, *Outlines*, xxi. and xxv.

MARSHALL, *Principles*, Book VI., Chaps. vii.-x.

SEAGER, *Principles*, Chaps. xii.-xiv.

SELIGMAN, *Principles*, Chaps. xxiii. and xxiv.

TAUSSIG, *Principles*, Chaps. xlii.-xliv., xlix., and l.

WALKER, *Political Economy*, Part IV, Chaps. ii. and iv.

CHAPTER XVI

INTEREST

188. Interest defined. — Interest is popularly thought of as a payment made for the use of money. Commonly, however, the person who borrows money desires to use not the money but something which he buys with it. The borrower, therefore, pays interest for the things for which he exchanges the money rather than for the money itself. In ordinary business procedure interest is paid for the use of productive capital, but it also often happens that the things which the borrower secures with the money or the purchasing power which the lender furnishes him are not productive capital. They may be, for instance, goods ready for consumption. But while they are not productive capital, from the point of view of the lender who has given the borrower control over them they are a source of income and are acquisitive capital. Interest, then, is the remuneration which is paid for the use of capital. The economist uses the term interest to include also the reward which the owner of productive capital receives for it when he uses it productively in his own business. There is some confusion in the popular use of the terms rent and interest. For example, it is usual to speak of the rent of a house and of interest on an investment in land. We shall find it useful to distinguish between the incomes from capital and from land and to refer to the one as interest and to the other as rent. The payment for the use of a house, therefore, is interest and the return for the use of the land upon which the house is located is rent. While

both returns are made in one payment they are, economically speaking, distinct incomes.

189. Gross interest and net interest. — When a rate of interest is named in a loan contract it often covers elements which are, strictly speaking, not interest at all. Where a capital good is loaned which is to be returned it often happens that the good is not in as good condition when it is returned as when it was loaned. It is partly worn out from use. A payment for wear and tear is therefore exacted and this payment is included in the contract rate of interest although it differs essentially from interest. Also, where there is an element of risk — a danger that the principal will not be returned, a charge is likely to be made to cover this risk and this charge is included in the contract rate of interest although it is essentially an insurance premium and not interest.

Again, as in the pawnbroking business, where small loans are made and a great deal of care must be given to looking after the character of the security, the contract interest rate contains an element which is really wages paid for the trouble of conducting the office. As a result of recent legislation in the District of Columbia restricting the rate of interest that might legally be charged, at least one money lender who formerly conducted a pawn office in Washington has erected an office across the Potomac in Virginia for the benefit of his clients. He furnishes them free automobile service across the river to his Virginia office and there makes the loans to them. Manifestly the cost of the automobile service is included in the contract rate of interest. All of these foreign elements must be deducted, however, before we reach the net rate of interest. The net rate of interest is best seen in loans of money in large sums on perfectly safe security and for long periods of time.

190. The rate of interest depends upon the supply of and the demand for capital. — Interest is a price which is paid

for the use of capital and like other prices it depends upon the supply of capital and the demand for capital. But when we have said this we have not gone very far in an explanation of interest, for the reason that the supply of capital and the demand for capital need in turn to have their origin explained. This explanation will serve, however, to show that the rate of interest does not depend upon the demand for and supply of money, as is popularly supposed. Doubling the amount of money in the country would not lower the rate of interest because with the amount of money doubled prices go up and a larger amount of money is needed to secure the capital which the borrower really desires. It may thus be seen that an increase in the supply of money brings with it a corresponding increase in the demand for money and over a long period of time the two influences cancel each other and do not affect the rate of interest.

191. Why is interest paid ? — The person who borrows has found by experience that he cannot borrow without paying interest and his answer to the question as to why interest is paid is likely to be that that is the only way in which money can be obtained. But the question goes much deeper than this. When the person borrows money and invests it in capital which is used up in production how does it happen that this capital re-creates itself in the product? Not only how does it reproduce itself but why does it produce a surplus in addition to the equivalent of itself, — a surplus which we know as interest? A great many varieties of answers have been given to these questions and in the following paragraphs we shall consider briefly a few of them.

192. The productivity theory of interest. — The existence of interest has often been explained simply on the ground that capital is productive. An artisan who works with elaborate machinery can turn out a much larger product in a day or in a year than can the artisan who works with less equipment.

The larger product, say the productivity theorists, is the work of capital. The owner of the capital gets interest for its use because the capital has produced the interest. A further question which arises at this point is whether the source of interest is to be found in the excess of physical product produced by the better machinery, or whether it is to be found in the greater value of the increased product. Some productivity theorists hold to the first view, while others maintain the second.

As a brief refutation of the first of these views it may be said that as the use of these elaborate machines is extended the value of the physical products which they produce is decreased and the interest which can be secured from any one machine is lessened. Since the physical product of a machine is as great as before but the interest which can be received for it varies with the selling price of the product, it is evident that interest cannot be explained purely in terms of physical productivity of the machine. In answer to the second view that interest is the difference between the value of the increased product and the value of the capital which goes to make the increased product, it may be objected that this explanation does not explain the value of the capital. If, as we believe, the value of the capital is dependent upon the value of the product, neither of these explanations is entirely adequate. The productivity theory which we have here criticized must not be confused with the marginal productivity explanation of interest which will be reserved for later treatment.

193. The use theory of interest. — The use theory of interest has much in common with the productivity theory. According to this theory the capitalist not only gives to the borrower the capital for the period of time of the loan but he also gives him the use of the capital. The capital reproduces itself in the product and the use of the capital creates the interest. The borrower, therefore, must pay back not

only the capital but also a sum for the use of the capital. The use of the capital according to this theory is an economic good distinct from the capital itself, and its value together with the value of the capital is transmitted to the product. In refutation of this it may be said that when the capital is loaned its use is loaned. The capitalist does not loan two things, the capital and the independent use of the capital, but the lending of the capital includes the lending of the use of the capital. This theory, therefore, fails to show an origin for interest different from the value out of which capital itself must be repaid.

194. The abstinence theory. — We have already said that the rate of interest depends upon the demand for capital and the supply of capital. The two theories which we have just investigated, namely, the productivity theory and the use theory, are attempts to explain interest from the side of demand for capital. The greater the productivity of capital or the greater the use of the capital the greater will be the demand for it and the higher will be the rate of interest. The abstinence theory, on the other hand, approaches the problem from the point of view of supply of capital. The saving of capital according to this view, the abstaining from the present consumption of goods in order that capital may be created, represents a sacrifice and the payment for this sacrifice or abstinence is one of the necessary costs in producing capital. The capitalist has a good moral claim to interest according to this theory because it is payment for the service which he renders and he has a good economic claim; that is, he is able to enforce his moral claim, because capital will not be produced unless payment is made for this abstinence.

To this theory of interest it has frequently been objected that saving or abstaining from immediate consumption does not represent a sacrifice in the case of a great many capitalists. In fact there are a great many wealthy persons who would

find it very much of a burden to be compelled to consume their income at once instead of saving it. It is undoubtedly true that there is much capital saved, the saving of which represents a sacrifice and which would not be saved if interest were not paid; and to this extent there is merit in the abstinence theory.

195. The exploitation theory of interest. — The socialists contend that the whole of the value of the product is due to the labor expended in producing it. They assert that the reason that capitalists are able to collect interest for the use of their capital is that capitalists are in possession of the material means of production without which production cannot go forward. From this point of vantage they are able to dictate terms to the laborers. Unless the laborers sell them the results of their labor on terms that permit the capitalists to reap interest they will not let production proceed. In other words, according to this view the capitalists are in the position of a highwayman who permits his victims to depart with their lives, provided that they deliver up a large part of their possessions.

There is a great deal of merit in the contention of the socialists that economic production can be ultimately traced back to labor. But they fail to understand the meaning of interest when they ascribe it to the exploitation of labor. Capitalistic processes as we have already seen are roundabout processes. They are spread out over a long period of time. The labor which was performed two years ago in the creation of intermediate products appears to-day in the form of the product ready for consumption; but the laborer who performed the work two years ago did not wait until to-day for his pay. If he had done so, he would have received all of the value which finally came from his labor of two years ago. He preferred, however, to receive his pay two years ago when the labor was performed and the product of his labor

was not yet ready for consumption, and he cannot reasonably complain if he received at that time not what the product of his labor would be worth to-day when it is ready for consumption, but what the product of his labor was worth at that time. The capitalist who has made it possible for him to receive pay for his labor before his labor is converted into finished product ready for consumption has performed a service for him which should relieve him from being stigmatized as merely an exploiter of labor.

196. The discount theory of interest. — The true explanation of the cause of interest is bound up with the explanation of the fact that present goods are, as a rule, worth more than future goods of like kind and number; that is, goods which are available for use now are worth more than the same quality and quantity of goods which will be available for use a year or five years or ten years from now. This means of course that the present goods are worth more to-day than the future goods are worth to-day. It is possible, when the time arrives when the future goods are available, that the future goods will be just as valuable then as the present goods are to-day.

There are three different factors any one of which separately, or all of which together, can account for a difference in value between present and future goods. These factors are: first, difference in want and provision for want in the present and in the future; second, the underestimate, due to perspective, of future advantages and future goods; and third, the greater fruitfulness of lengthy methods of production. Let us examine these three factors in the order given. First, with regard to differences in want and provision for want in the present and in the future: beginners in many occupations, for example, young lawyers, young doctors, or young engineers, have in the present ordinarily only meager incomes with which to satisfy present needs. In the years to

come, probably, their hope will be fulfilled that their incomes will very materially increase and it will not then be necessary to practice the careful economies that they must now practice if they are to live within their present incomes. For this class of persons it is evident that the future holds a greater provision for want than the present. The same thing is true of a large class of persons who are suffering distress at the present as a result of various kinds of accident or of illness. Business men who have just weathered a year of financial depression, or farmers who have just lost their crops by hail or drought or the visitation of insects, or house owners whose houses have burnt down, or workingmen who have fallen ill and are out of work, — all of these classes of persons are suffering now from the scantiness of their incomes, but when normal conditions return they will be better off than they are now. To this, some one may object that there are other classes of persons who are enjoying good incomes to-day who will suffer from bad business and bad health and unemployment in the future. But it must be remembered that it is possible for those who are enjoying good incomes to-day to keep a part of those incomes in the form of money or other durable goods to help satisfy future wants, but it is not possible for the former classes of persons to apply part of their future income in the satisfaction of their present wants. It would appear, therefore, that those with relatively large present incomes are readily able to use those incomes to satisfy future wants but that the persons with relatively large future incomes are not able to use them for satisfying present wants. The net result is that there is a relative shortage of present goods for supplying present wants as compared with future goods for supplying future wants, and, consequently, because of this shortage present goods are valued more highly than future goods.

A second reason why present goods are as a rule worth more

than future goods of like kind and number is to be found in the fact that we systematically underestimate future wants and the goods which are to satisfy them. The Indian who parts with the land of his forefathers for a few trinkets, the workingman who drinks his week's wages on Saturday night and suffers for food during the following week, or the man who cannot refrain from the consumption of a dish which has been denied to him by his physician will serve as an example of the general tendency to underestimate the wants of the future and the goods which are to satisfy them, as compared with present wants and present goods. The explanation of this underestimate of future wants and goods is to be found partly in our lack of imagination in regard to future wants, partly in the weakness of our will which results in our not making provision for the future which we know we ought to make, and partly in our realization that life is uncertain and that we may not be alive to enjoy the future goods.

In the third place, the person who possesses present goods which he may use for present consumption is enabled to devote his time to roundabout processes of production, while the person with future goods of the same quantity and quality must devote his present time to the direct production of goods to satisfy his immediate needs. This direct production of goods is less fruitful than the roundabout production of goods, and for this reason, a person will value present goods which permit him to undertake roundabout processes more highly than future goods of the same kind and number which leave him under the present necessity of engaging in direct production which is less fruitful. As a result of these three factors present goods are as a rule worth more than future goods of like kind and number and this fact explains why interest is paid.

197. The rate of interest. — The rate of interest, or the rate at which people discount the future, depends upon the

characteristics of different individuals as well as upon the size and character of their incomes. Persons who have much foresight and strong self-control, who are accustomed to live modestly and who expect to live to a ripe old age, who have a family in whose welfare they are interested, — such persons are inclined to discount the future at a low rate. They tend to make the rate of interest low. On the other hand, persons who are short-sighted, weak-willed, accustomed to spend freely, uncertain of life and selfish, discount the future at a high rate. They tend to raise the rate of interest. The rate of interest is a composite of the rates of discount of all of the people who borrow and lend.

The different individuals' rates of discount of the future depend not alone upon the characters of the individuals but upon the characters of their incomes as well. If the income promises to increase rapidly in the future, its owner will tend to have a high discount rate, other things being equal. On the other hand, a declining income tends to produce a low discount rate. The larger the income, other things being equal, the lower will be the discount rate. If one's income is extremely small, he will discount the future at a high rate; a smaller amount of goods available for his use to-day he will consider equivalent to a much larger amount of goods available for use next year; whereas if an income is very large, its owner will discount the future at a low rate.

The rate of discounting the future, then, changes as the amount of income changes. This fact is extremely important in fixing the standard rate of interest. For example, let us take as representatives of all persons the five persons, A, B, C, D, and E. Let us say that with A's character what it is, and his present supply of goods what it is relatively to the future, he does not wish to discount the future at all. He considers a hundred dollars a year from to-day as desirable as a hundred dollars to-day. Let us say that in the cases of

B, C, D, and E, the rate of discounting the future is such that a hundred dollars now is considered equivalent to a hundred and three dollars, a hundred and five dollars, a hundred and six dollars, and a hundred and ten dollars, respectively, a year from now. It is a matter of indifference to A, as we have seen, whether he has a hundred dollars to-day or a hundred dollars a year from now, but E is very anxious to have his hundred dollars to-day. Therefore, A gives to E a hundred dollars of his income with the understanding that a year from now E will give to A in return an equivalent part of his income. If necessary, E is willing to give a hundred and ten dollars of his next year's income for a hundred dollars to-day. Just what rate of interest E will pay A will depend upon their relative bargaining power and the condition of the loan market. But after A has given E one hundred dollars of this year's income and has by this means added one hundred dollars to his own next year's income, his rate of discounting the future undergoes a change because his next year's income is relatively higher as compared with his this year's income. A now has a preference for to-day's income as compared with next year's income. Let us represent this preference by one per cent. In other words, A now considers that a hundred dollars to-day is worth a hundred and one dollars a year from now. On the other hand, E has increased his present income relatively to his future income and has therefore decreased his rate of discounting the future. Let us say that he decreased it one per cent, or, in other words, that he now considers a hundred dollars to-day equivalent not to a hundred and ten dollars a year from now as formerly, but to one hundred and nine dollars a year from now.

D is also very anxious to have an increased income to-day in exchange for some of next year's income. His anxiety is represented by a discounting of the future at the rate of six per cent per annum. B, on the other hand, discounts the fu-

ture at the low rate of three per cent per annum. Suppose, now, that B lets D have one hundred dollars to-day in return for a hundred and six dollars a year from now. This will change the discount rates of both B and D. Let us say that it changes them one per cent and that B now considers a hundred dollars to-day equivalent to a hundred and four dollars a year from now, and D considers a hundred dollars to-day equivalent to a hundred and five dollars a year from now. This practice of loaning will continue, and those who discount the future at a low rate will lend to those who discount it at a high rate, and both the lenders and the borrowers will continue to change the amount of their present income in its relation to their future income until they all arrive at the same rate of discount for the future. This will be the market rate of interest.

198. The marginal productivity theory of interest. — The discount theory of interest which we have just examined emphasizes the supply side of the problem of interest. It calls attention to the strength of the forces which are conspiring to defer the consumption of present income to a future date and thus creating capital. The marginal productivity theory, which will be treated next, places the emphasis on the demand side of the problem. It points to the strength of the forces which call for an increase of capital. The discount theory does not entirely neglect the demand side nor does the marginal productivity theory fail to account for supply. Still the first is predominantly a supply theory of interest and the second is a demand theory. They approach the problem from different sides and the explanation given by both theories together furnishes a more complete view than that which one gets from either theory alone.

In the explanation of interest, as in the explanation of the other shares in distribution, the marginal productivity theory is intimately associated with the law of diminishing

returns. Four machines of an advanced type installed in a factory may be effective in producing a considerable increase in output as compared with old methods. The adding of a fifth machine may increase not only the total output but also the output per machine, while the addition of a sixth machine, although resulting in an addition to the total output, may mean a diminution of product per machine. Nevertheless, it will be useful to continue to add machines as long as each additional machine contributes to the total product a greater amount than the cost of the machine. If the employer hires the machine from a capitalist, he will have to pay a gross interest which will include an amount for depreciation sufficient to pay for wear and tear on the machine and a net interest for the use of the machine. If this charge which the capitalist makes is less than the amount added by the machine to the total product, the employer will consider the situation a very favorable one and he will hire more machines of this kind. He will continue to do so until the point is reached where the charge made for the use of the machine is just equal to the product added by the last machine secured.

Capitalists who have machines to furnish to employers will bid against one another in their efforts to place the machines, and will thus bring down the interest; that is, the hire of the machines, to the point where it just pays to supply machines. On the other hand, the employers will compete against one another to secure the capital; namely, the machines, and hence will bid up interest to the point where the added product of an additional machine just equals what they must pay for the use of the machine. Thus more machines will continue to be employed and the product of the marginal machine will be continually reduced until it does not pay to make any more machines of this kind. At this point the interest paid for the use of a machine will just equal

the marginal product of the machine after a proper amount has been provided for depreciation.

199. The value of the machine. — The marginal productivity theory explains the amount of rental which will be paid for various capital goods. It does not explain the *rate* of interest, for the rate of interest is not an amount of product per machine but the relation between a certain value of product and the capital value of the machine. In the chapter on rent we saw that the value of land depends upon the rental instead of the rental's depending upon the value of the land. In the case of capital the situation is the same. The capital value of a machine depends upon the rental or the interest which can be obtained for it; the interest does not depend upon the capital value.

Suppose, for example, that the employer in the preceding paragraph should decide to buy a machine from a capitalist. Let us say that the marginal product of the machine was a hundred dollars per year and that it was expected that the machine would continue to render service to the value of one hundred dollars per year for ten years, after which it would be worn out and would have to be discarded as of no value. The employer, therefore, expects to get from the machine, services to the value of one thousand dollars in the ten years to come. But he would not think of paying one thousand dollars for the machine.

We have already learned from our consideration of the discount theory that the hundred dollars in services that the machine renders next year is not worth a hundred dollars to-day, and that the hundred dollars in services that the machine renders the year after next is not worth as much to-day as the hundred dollars in services which the machine will render next year, and so on for the ten years. The outside amount the employer is willing to pay for the machine to-day will be the discounted value of the future services. If in the

market in which he borrows money the rate of interest is five per cent per annum, he will discount the future services of the machine at the rate of five per cent per annum, and the outside price which he will be willing to pay will be approximately seven hundred seventy-two dollars. Similarly, a machine which would be expected to give an income of one hundred dollars a year, not for ten years but forever, would be purchased not for the sum of the value of the services which the machine would render through all of the years to come, which would be an infinite amount, but for the discounted value of those future services, which would be a finite amount. If the rate of discount is five per cent, the present discounted value of this future series of services of a hundred dollars per year forever would amount at the present time to twenty thousand dollars. From the point of view of the purchaser of the machine the value of the machine, therefore, is determined by discounting the future services of the machine; or, in other words, by capitalizing the yearly income from the machine.

Of course, the value of machines is fixed not by buyers alone but by buyers and sellers. At first thought it might seem that while the buyer gauges the value of the machine by the expected income and the rate of discount, the sellers are able to arrive at the value of the machine without any consideration of the rate of discount. One might think that the sellers, if they are producing under competitive conditions, could tell what the capital value of the machine would be from their knowledge of what it had cost to produce it. This, however, is a one-sided and incomplete view of the matter. The cost of producing a machine depends, among other things, on the number of machines produced. As the number of machines produced is increased the marginal product of the machines is lessened, and the machines will continue to be produced to the point where the capitalized value of their

marginal product is just equal to the cost of production. Estimated marginal product, therefore, influences sellers' estimates of capital value by regulating the number of machines.

200. The justification of interest taking.—To the socialistic claim that interest is robbery and that, therefore, interest taking ought to be prohibited, the popular answer is, interest is justifiable because capital is productive. This answer contains a grain of truth. While it is true that capitalistic methods of production are more productive than direct methods, capitalistic methods of production are, as we have seen, really simply the application of labor to the productive processes in a roundabout fashion instead of directly. The socialist, therefore, has a right to protest that the greater productivity of the capitalistic methods may be traced back to the original labor that created the capital. Therefore, he holds that even if capital does produce interest, the interest should not go to the capitalist, but to the laborer who produced the capital.

But the case for the capitalist is better than this exchange of arguments would indicate. The capitalist is entitled to interest because he chooses to defer the consumption of his income from the present to the future. Often this is no sacrifice at all to him but still it is a service to society. If there were enough persons who chose to defer present consumption of income to the future, there would be no interest, since there would be no discounting of the future. Since society as a whole chooses to make use of the putting off of consumption by a relatively small number of persons, it is only fair that society should pay for the service which is rendered to it. The socialists urge that society as a whole should look after this function of saving capital. Whenever society as a whole develops foresight and will power and the other characteristics necessary to saving in a sufficient degree, it may well be

that society as a whole can do its own saving. In such a case the payment of interest to individuals might be done away with. As we know society to-day, however, whether it is organized under the form of an autocratic government or under a democracy, there is room for serious doubt that it has sufficient foresight and self-denial to defer present consumption sufficiently to maintain the capital requisite for production in the future.

QUESTIONS

1. What is meant by interest? What is the distinction between interest and rent?
2. What elements must be subtracted from gross interest so as to leave only net interest?
3. Does the rate of interest depend upon the country's supply of money? Why?
4. Is it a sufficient explanation of interest to say that interest is the excess of the output which is turned out when capital is used, over what would be turned out if labor were employed without capital? Why?
5. What is the weakness of the use theory of interest?
6. State and discuss the abstinence theory of interest.
7. What are the merits of the exploitation theory of interest?
8. How do you account for the difference in value between present and future goods?
9. What are the characteristics of persons and of incomes which influence the rate of interest? Show how these various influences operate to fix the rate of interest.
10. Can the marginal productivity theory of interest be harmonized with the discount theory? Explain your answer.
11. What determines the value of a machine which is to be used as a capital good?
12. How should you justify interest taking?

SUPPLEMENTARY READING

BÖHM-BAWERK, *Positive Theory of Capital*, Book v.
CARVER, *Distribution*, Chap. vi.
DEVAS, *Political Economy*, Book III, Chap. iii.

ELY, Outlines, Chap. xxiv.

FISHER, The Rate of Interest, Chap. vi.

MARSHALL, Principles, Book VI, chap. VI.¹

SEAGER, Principles, Chap. xvi.

SELIGMAN, Principles, Chap. xxv.

TAUSSIG, Principles, Chaps. xxxviii.-xl.

CHAPTER XVII

WAGES

201. Definition of wages. — Wages are the share of the product of industry which is assigned as a remuneration of labor. Wages as here used includes salaries as well as what is more popularly known as wages. The term includes not only the payments under contract that the employer makes to his employee, but also the payments for labor where the laborer sells his products directly to the consumer. Thus the gardener in the price which he obtains for his vegetables receives wages for the labor which he has expended upon his garden.

202. The relation of demand and supply to wages. Since wages are a price which is paid for labor, the rate of wages depends, like other prices, upon the conditions of demand and supply. Other things being equal, the rate of wages will vary directly with the demand for labor and inversely with the supply of labor. There are, however, innumerable influences affecting demand and supply which tend to obscure the fact of their control over wages.

Many persons have the feeling that there is something degrading in the thought that the reward which is paid for human labor is determined on the same principles of supply and demand as govern the price of wheat or lumber. But such persons should find fault with the fact rather than with the statement of the fact, and if it is unworthy that persons should be paid for their labor on the same principles that govern the payment for wheat, other principles instead of

other words should be used; new methods of fixing wages rather than new ways of talking about it are called for.

203. The mobility of labor. — By the mobility of labor we mean the ease or difficulty with which it is moved from one place to another or from one occupation to another. Over a short period of time labor is not mobile. For a difference of a cent a bushel over the cost of transportation wheat is readily shunted from one market to another many miles distant. The laborer, on the other hand, who has a family does not move so readily in response to wage changes. In the first place, the breaking up of his housekeeping in one place and the starting in another involves much annoyance and confusion and expense. But more than this he and his family have made friends in the old home and are disinclined to leave them and to begin as strangers in a new home. They will prefer to accept a somewhat lower wage in the old place rather than make the change.

But there is a second kind of immobility which is even harder to overcome in many instances than the one already cited. This is the immobility which prevents the worker from moving from one occupation to another. In the more skilled occupations the workers may be highly efficient in their own lines of work but totally inefficient in other lines. Here considerable variations in wages could exist in the different occupations without drawing an appreciable supply of labor from one occupation to another. In one occupation wages might be high because of the relative scarcity of labor as compared with the demand for it, and in a neighboring trade wages might be low because of an oversupply of labor as compared with the demand for it. So while the law of supply and demand would regulate wages within the individual occupation it would seem that here it would not regulate wages between the two occupations. In the long run, however, there will be a tendency to even out these inequalities in wages.

While labor may not be mobile at a given time with regard to its movement from place to place or from trade to trade, there is a tendency for the younger generation of workers to enter the trades which offer the best rewards, and to refrain from entering the trades where wages are relatively low. It is further true that while the laborers do not like to leave in a body to move from a place of low wages to a place of high wages, over a long period of time families and individuals will make the change and the tendency will be for the flow of labor to be towards the place of high wages and away from the place of low wages. Therefore, considering long periods of time there is a tendency for competition to even out the difference in wages in different places and occupations.

204. Competitive wages are not equal wages. — Since different workers have different capacities for work the tendency of competition is not to make all wages equal for all workers but to make wages unequal and in proportion to the productivity of the workers. Employers will naturally be willing to pay a higher wage in order to secure the more capable workmen. In so far, then, as competition has free sway, wages will tend to be unequal for workers of different capacities.

205. The cost of labor. — Free and fair competition tends to equalize, not wages, but labor cost. If one man does only half as much work as another and receives the same wage, the first man's labor costs the employer twice as much as the second man's. The labor costs will be the same only when the second man receives twice as much wages as the first. Competition tends to work in this direction, for there is a tendency to pay higher wages to the man who does more work. There are many forces at work, however, which prevent this tendency from becoming a reality. Among these may be noted the standard rate of the trade union.

206. Real and nominal wages. — The laborer's well-being depends not only upon the amount of wages he receives but also upon the prices of the things which he buys with his money. If the prices which must be paid for the things which he buys increase more rapidly than the money wages which he receives for his labor, he is able to buy fewer things, and his plane of living is lowered. The United States Bureau of Labor Statistics¹ has recently published the following table in which union rates of wages and retail prices of food for the years 1907–1915 inclusive are compared :

INDEX NUMBERS OF UNION WAGE RATES AND HOURS OF LABOR,
AND OF RETAIL PRICES OF FOOD, 1907 TO 1915
(1907 = 100)

YEAR	RATES OF WAGES PER HOUR	FULL-TIME HOURS PER WEEK	RATES OF WAGES PER WEEK, FULL TIME	RETAIL PRICES OF FOOD
1907	100	100	100	100
1908	101	100	101	103
1909	102	99	102	108
1910	105	99	104	113
1911	107	98	105	112
1912	109	98	107	119
1913	111	98	109	122
1914	114	97	111	125
1915	114	97	112	124

While the union rate of wages per hour increased 14 per cent from 1907 to 1915, and the union rate of wages per week increased 12 per cent, retail prices of food increased 24 per cent. If prices other than those for food increased proportionately to the increase in prices of food, the union wage earner was actually worse off in 1915 than in 1907. The

¹ Bulletin of the United States Bureau of Labor Statistics. Whole Number 194, May, 1916.

purchasing power of his weekly wages decreased from 1 to $\frac{11}{14}$, or approximately 10 per cent during the eight-year period. Thus while his *nominal* wages, *i.e.* his wages expressed in terms of money, increased, his *real* wages, *i.e.* his wages expressed in terms of purchasing power, decreased.

207. Time wages, piecework wages, and efficiency wages. — The laborer may receive time wages; that is, he may be paid for his labor by the day, or by the week, or by the month, or by the year; or he may receive piecework wages; that is, he may be paid a certain amount for each piece of work which he turns out, the amount which he earns in a day being reckoned by multiplying the number of articles which he has completed by the rate per piece. Two workers of the same ability in different establishments may receive the same piece rate, but turn out different amounts during the same period for the reason that the one factory is equipped with better machinery than the other. Wages which are measured not by the time during which the workers work nor by the number of pieces completed but by the ability of the worker, may be called efficiency wages. It is efficiency wages rather than time wages or piece wages which competition tends to equalize.

208. Inequalities in wages. — We have spoken of a *tendency* of competition to equalize wages but a very little observation will suffice to show us that wages are very unequal. It will aid us in arriving at an understanding of this fact if we think of the many thousands of different occupations as separate compartments each having its own demand for and supply of labor. Some of these compartments may be conceived as separated from neighboring compartments by solid walls through which the labor supply cannot flow. In other compartments the walls furnish some resistance to the flow of labor but the resistance is not insuperable. In still other compartments labor flows in and out without hindrance.

In the first of these compartments the influence of competition is worked out only over long periods of time. The rate of wages in occupations represented by compartments of this class is likely to vary widely from the general rate of wages in other occupations.

In occupations represented by the compartments of the second class the rate of wages is determined not only by supply and demand within the occupation, but also, to a smaller extent, by supply and demand from outside. Wages in these occupations will not vary so widely from occupation to occupation as in the former class of occupations.

In occupations of the third class, represented by the compartments with free ingress and egress, supply and demand outside the occupation are as potent in fixing the level of wages as the supply and demand within the occupation. There is likely therefore to be little difference in the rates of wages in different occupations of this class.

209. Labor monopoly. — Monopoly consists in the ability to regulate prices through control of the supply of, or the demand for, the thing monopolized. In those compartments discussed in the preceding paragraph where the labor supply does not flow in freely from the neighboring compartments a condition of monopoly may exist. The laborers already in the occupation may be in a position to keep others from entering it, with the result that wages are kept up above the level which would prevail if there were competition from outside. Here there is a monopoly element in the wages due to control of supply by the workers already in the occupation.

210. Other causes of differences in wages in different occupations. — Adam Smith enumerated the five following circumstances as accounting for the difference in money wages in different occupations: "First, the agreeableness or disagreeableness of the employments themselves; secondly,

the easiness and cheapness, or the difficulty and expense of learning them; thirdly, the constancy or inconstancy of employment in them; fourthly, the small or great trust which must be reposed in those who exercise them; and, fifthly, the probability or improbability of success in them." In support of the first point he instances the fact that "the most detestable of all occupations, that of public executioner, is, in proportion to the quantity of work done, better paid than any common trade whatever." In the second place it is to be expected that in those occupations in which the labor supply is kept down either on account of the difficulty or the expense of learning the trade, other things being equal, wages will be higher than in occupations in which there are no restrictions upon those who desire to enter. Again, in certain trades in which there are seasons of unemployment, wages tend to be higher during the time of employment than in trades which are similar in other respects but in which the employment is constant. It would be a mistake, however, to suppose that the higher wages for the shorter period will, on the average, be sufficient to compensate for the time during which there is no employment. Smith illustrates the fourth point as follows: "The wages of goldsmiths and jewelers are everywhere superior to those of many other workmen, not only of equal, but of much superior ingenuity, on account of the precious metals with which they are intrusted." Finally, in those occupations where there is no likelihood of failure the supply of labor is likely to be greater than in those occupations where failure is likely, and thus those who succeed in the latter occupations are reasonably sure to achieve greater success.

211. The shortened workday. — In the factories of a hundred years ago a working day of fourteen or sixteen hours was by no means uncommon. When the laboring population of England began to demand a universal ten-hour day

factory owners protested that it would be impossible for them to remain in business and continue to pay wages if the day was thus shortened. But in spite of these dire forebodings the working day has been shortened to ten hours and in many occupations to eight hours and the threatened peril has not befallen. On the contrary, the working classes are now demanding a universal eight-hour day.

A twofold argument is advanced for the shorter work-day. In the first place, say the labor leaders, a universal eight-hour work day would result in furnishing employment to a great many persons who are now unemployed, since there is a certain amount of work to be done and since those who are employed at present would not be able to do so much in eight hours as they could do in ten. The second argument for the eight-hour labor day is advanced by those economists who hold that the shorter workday will increase the efficiency of the worker to such a degree that he will be able to do as much work in eight hours as he formerly did in ten. These two lines of argument are contradictory in that one maintains that the laborer will not do as much in eight hours as in ten while the other states that he will do as much.

The truth of the matter is that the increase in efficiency resulting from the shorter workday will depend upon the character of the work. Where the labor to be performed is light and consists in guiding a machine or a team of horses it is very likely to be true that the longer the workday the greater will be the amount produced, provided, of course, that the day does not extend beyond twelve or fourteen hours. On the other hand, where the work is laborious it may often happen that a greater output can be achieved in eight hours than in ten because a longer period of rest and recuperation makes for a better conditioned workman. The real justification of the movement for a shorter workday lies in the fact that industry is sufficiently productive so that the laboring

population can afford to devote themselves to other interests than the mere production of wealth. The shortened workday means more time for rest and recreation, more time for mental and spiritual and physical development. The economic ideal is not that as much wealth be produced as possible, but that human life be made as rich as possible.

212. Collective bargaining. — We have seen that under competitive conditions the laborer *tends* to get his marginal product. He may, however, fail to get this amount because he is a weaker bargainer than his employer. His weakness as a bargainer may arise from his ignorance of the value of his labor or from a timidity which prevents him from asking as much as he would receive if he had the courage to ask. Or it may arise from the fact that he is in want and is compelled to accept whatever terms are offered to him to supply his present need. As an individual the laborer is thus at a disadvantage in dealing with his employer.

But when the workers organize and deal collectively with employers many of these disadvantages disappear for the reason that the representatives of the laborers learn to know the conditions of production as well as the employer does, and to develop a skill in bargaining equal to that of the employer himself. Also where there are out-of-work benefits furnished by the labor organization the laborer is not compelled to accept work upon exceptionally disadvantageous terms. Where the workers bargain collectively, therefore, they are likely to receive more nearly the marginal product of labor than where they are compelled to bargain individually. Where particular groups of laborers are strongly organized and are able to prevent other laborers from joining their ranks, they may indeed be able to establish a monopoly of the supply of their particular kind of labor and thus be in a position to receive more for their work than what their marginal product under conditions of competition would be.

✓ **213. Labor organizations.** — The general type of labor organizations in the United States is according to craft. Thus, for example, in a given city there are as many labor unions as there are trades or crafts represented among the laborers of the city. The members of each trade forming a local union unite with the local union of workers of the same trade in other cities of the state to form a state federation for that particular trade. The members of the trade in the various states together, sometimes with organizations from Mexico or Canada or other foreign countries, unite to form a national or international union for the particular trade. Nearly all of these national and international unions unite again to form the American Federation of Labor. Thus it will be seen that in this type of labor organization the grouping is by trades or crafts instead of by localities.

✕ A second type is that of the older Knights of Labor and of the more recent Industrial Workers of the World. Here the organization of the workers is made irrespective of the trade at which they are employed. In the case of the latter mentioned organization the local unit is the industrial establishment and not the trade; that is, all of the workers in the same establishment belong to the same union whether they are bricklayers or masons or carpenters or plasterers or what not. The ideal of the Industrial Workers is to unite these local groups into "one big union" irrespective of craft lines. At the present time the idea of one big union does not make a strong appeal to the skilled workers generally because they prefer to retain their craft form of organization.

214. Strikes and boycotts. — Labor organizations secure their end, namely, the improvement of the conditions of the workers, mainly in two ways, — first through militant efforts directed toward the employer, and secondly, through fraternal activities such as sickness and death benefits and the payments of out-of-work insurance. The principal weapons

of offense employed by labor organizations in the warfare against employers are the strike and the boycott. A strike is a concerted cessation of work on the part of the employees with the purpose of preventing other workers from taking their places and thus compelling their employers to grant their demands. In order that the strike may accomplish its purpose it is necessary that the strike breakers be prevented from taking the places vacated by the strikers. This is accomplished by picketing the establishment where the strike has taken place; that is, by stationing in the neighborhood of such establishment persons who are friendly to the strikers and who undertake either by persuasion or by open violence to prevent others from taking the places of the strikers. When it is carried on in a peaceful and orderly way, picketing is a perfectly lawful procedure. Unfortunately, however, violence is likely to accompany the efforts of the pickets to prevent the strike breakers from taking the empty places and it then becomes unlawful.

To protect the interest of the employer against this lawlessness courts issue injunctions restraining the workers from committing unlawful acts. Where injunctions are violated the courts have set such penalties as they think proper without giving the accused persons a jury trial to which they would be entitled if their offense had been the original unlawful act instead of the violation of the injunction. The use of the injunction in labor disputes has occasioned much bitterness on the part of the working class and recently they have used their influence to pass legislation restricting the use of the injunction by Federal courts.

In recent years as trade unionism has grown in strength and influence strikes have become much less disorderly than formerly was the case. As the unions become better organized and better financed, as they disavow the use of violence and thus tend to array public sentiment on their

side of the issue they increase to a marked extent their chances for success in the strike. The successful labor leader of to-day recognizes the strike as an instrument of warfare, which must not be used too often. In fact it is the employer's fear of a strike rather than the strike itself which is the labor leader's most useful weapon.

The boycott is an attempt to coerce an employer by withdrawing patronage from him. In the case of the primary boycott a group of persons agree to cease business dealings with the person whom they wish to coerce. In the case of the secondary boycott the attempt is made to coerce the employer by influencing third parties to abstain from business dealings with him. The secondary boycott, which is the more effective of the two forms, is generally held to-day to be illegal.

While the workers use the strike and the boycott as their weapons in the industrial warfare the employers on their side make use of the lockout and the blacklist. In the case of the lockout the employer temporarily discontinues production in order to make his employees more amenable to reason from his point of view. It is the counterpart of the strike. The blacklist is a device by means of which employers keep each other informed concerning workingmen who make themselves particularly offensive through engaging in strikes or other activities. The employers' blacklist corresponds to the employees' boycott.

215. Conciliation and arbitration. — Where differences exist between employers and employees which seem likely to disturb the industrial peace disinterested outsiders are often able to bring the two parties together and thus prevent an open conflict. Where outsiders use their influence to bring the parties together and to induce them to come to an agreement the action is usually spoken of as conciliation. Boards of conciliation are sometimes private and sometimes govern-

mental. The conciliation department of the National Civic Federation is an example of the former. State boards of conciliation and arbitration in so far as they fall short of arbitration will serve as examples of the latter. Boards of arbitration as distinguished from boards of conciliation undertake not so much to induce the parties to come to an understanding themselves as to settle the question at issue and to furnish a basis of agreement for the parties. Arbitration may be either voluntary or compulsory. The Canadian Industrial Disputes Investigation Act furnishes an example of voluntary arbitration. Under this act strikes and lockouts are prohibited until the arbitration board has had time to investigate and to report upon the merits of the dispute. After the board has made its report employees have full permission to strike and employers to lockout. In the case of compulsory arbitration, as it is found, for example, in the states of Australia, the findings of the courts of arbitration are binding upon both parties.

216. Coöperation and profit-sharing. — Two other methods which seek to fix the remuneration for labor in such a way as to avoid industrial disputes are coöperation and profit sharing. Under the plan of coöperation the workers become the employer. Whatever profits are made, are divided among the workers and the losses must be borne by them. There is here no possibility of disputes between employer and employee. The coöperative plan is at its best in enterprises where little capital is required, where the workers are pretty nearly all on the same level of skill, and where there is a local market for the products. On the other hand, where there is much capital required, where the organization of labor is complicated, and where a high degree of skill is required in marketing the product, coöperative production is at a great disadvantage.

Under the profit-sharing plan the employer is retained and

the laborers are paid wages. But in addition to the stipulated wages, they receive a percentage also of the net profits of the business. The purpose of the plan of profit-sharing from the employer's point of view is to enlist the interest of the employees in the enterprise and to secure their coöperation in making such economies as are possible as well as to keep them contented and to avoid strikes. Profit-sharing may take the form of a cash payment to the employees at the end of the business year or a bonus may be paid to them in the form of shares of stock in the corporation or in the form of old age or invalidity or life insurance. Profit-sharing has not been widely adopted partly because of the hostility of trade unions, who see in it a plan to weaken their position, and partly because it masquerades as philanthropy on the part of the employer.

Various efficiency plans have been evolved in recent years which contemplate rewarding the worker not in proportion to the net profits of the business but in proportion to the gains from his improved productivity. These systems are objected to, on the part of the union, on the ground that they are merely devices for speeding up the employees and that the ultimate result will be the same as the result of other speeding up devices; namely, that when the employees are all speeded up to increased efficiency, wages will be cut so that wages plus bonus will be no greater than the former wages alone. Unfortunately, there is much historical justification for this fear on the part of the wage earners. It is to be hoped, however, that some solution may be arrived at by employers and employees by which both parties may be made to see the utility of introducing efficiency systems which will effect economies in materials and in the time of workers and increase their wages without unduly taxing their strength.

QUESTIONS

1. What is meant by wages? Does a person ever pay wages to himself?
2. How does an increase in the demand for labor affect wages? An increase in the supply of labor?
3. Is labor as mobile as wheat? Why?
4. Where laborers compete for positions are their wages likely to be equal? Explain.
5. Where there is free competition will the costs of labor to the employers tend to be equal? Explain.
6. Contrast real and nominal wages.
7. Contrast efficiency wages with time wages and piecework wages.
8. How does labor monopoly affect wages?
9. Why do rates of wages differ from occupation to occupation?
10. Does shortening the workday increase the productivity of labor? What is the real justification of the eight-hour day?
11. Under what disadvantages are the laborers as bargainers? What are the benefits of collective bargaining?
12. Contrast the plan of organization of the American Federation of Labor with that of the Industrial Workers of the World.
13. What is a strike? A boycott? Discuss the legality of picketing.
14. What is meant by conciliation and arbitration?
15. What conditions of production are favorable to coöperation? Unfavorable?
16. What is the plan of profit sharing?

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 ELY, *Outlines*, Chaps. xxii. and xxiii.
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 MARSHALL, *Principles*, Book VI., Chaps. iii.-v.
 RYAN, *A Living Wage*, Chaps. iii.-vii.
 SEAGER, *Principles*, Chap. xv.
 SELIGMAN, *Principles*, Chaps. xxvi. and xxvii.
 TAUSSIG, *Principles*, Chaps. xlvii. and xlviii.

CHAPTER XVIII

THE SINGLE TAX AND SOCIALISM

217. The need of a fairer distribution of wealth. — In a primitive community producing with little capital, the material conditions of life are likely to be hard for the generality of the people. But under these conditions the need of improvement in the processes of production is likely to attract more attention than the need of a fairer distribution of the goods produced. Under such circumstances it is evident to all that the goods must be produced before they can be used to satisfy the wants of the people. But as technical knowledge advances and as capitalistic methods and the division of labor contribute enormously to the industrial output, the center of interest shifts from production to distribution. If some men are rich while others are poor, if some find the problem of earning a living a distressing one while others live in the lap of luxury, the question of the fairness of distribution is certain to come up for consideration. Two groups of reformers who have done much to keep public attention focused upon the unfairness of the distribution of wealth are the single taxers and the socialists. Their constructive proposals for a better distribution of wealth will be considered in this chapter.

A. THE SINGLE TAX

218. What the single taxers propose. — Many single taxers in the past and notably Henry George, their leader, have proposed that the state collect as the one single tax

the whole of the rental of land and that all other taxes be done away with. This means, of course, the confiscation of the rent of land and with it the confiscation of the value of land, for the reason that the value of land is its capitalized rental. Henry George said that he would not have the government confiscate the land itself but only its rent. He would have the owners of the land continue to own the land but he would have them turn the economic rent of it over to the government as a tax. But this distinction between the land itself and the rental of the land is not of much importance. If the state compelled all land owners to contribute the total yearly rental of the land to the state they would care little whether or not the state left them the empty title of ownership. We may, therefore, say that these extreme single taxers desire that the state confiscate all land.

A more moderate group of single taxers proposed that all taxes be done away with other than the tax on rent, but they would have the government confiscate only so much of the rent as is necessary to carry on the work of the government. They believe that a very substantial percentage of the rental would remain to the present owners after sufficient funds had been secured from this source to provide the necessary expenses of the government.

219. The argument of the single taxers. — The single taxers point out in the first place that in a new and sparsely settled community the land has little or no value; but as the population grows by natural increase and by immigration the rent of land rises until in the great cities it reaches marvelous heights. The general increase in the demand for land is brought about by the increasing population which has produced the increased rental and this is capitalized in the enormous values of city land. But, say the single taxers, the rent of land and the value of land have increased whether

the owner of the land has worked or slept. The rent and the value are produced by society and not by the owner, and therefore they belong, say the single taxers, to society and not to the individual; and society ought to appropriate them through taxation.

9 - In the second place, say the single taxers, the single tax on land value looked at clearly from the fiscal point of view is an ideal tax. Most taxes can be shifted and are not ultimately borne by the persons who pay them in the first instance. Thus a tax on imported goods is paid to the government by the importers, but as a whole it is not likely to be borne ultimately by the importers. Depending upon market conditions, a large part of it is likely to be shifted to the ultimate consumer of the goods in the form of higher prices; some of it may be borne by the dealers who handle the goods while a part of it may be shifted back to the producer in the foreign country. But, say the single taxers, a tax on land values is paid by the owner of the land and is ultimately borne by the owner of the land. To illustrate: suppose that the rental of a tract of land is one thousand dollars a year and that the current rate of interest on safe investments is 5 per cent. This gives the tract of land a capital value of twenty thousand dollars. If now the government levies a tax of 50 per cent on the ground rent, taking one half of the thousand dollars for itself, the owner of the land who pays the tax, five hundred dollars a year in this instance, must bear it finally for the reason that he is unable to pass it on to his tenant in the form of higher rent. If the policy of collecting a 50 per cent tax on rent is generally recognized as a permanent governmental policy, the result will be that the capital value, the selling price of the land, will be cut in half. The land which would formerly sell for twenty thousand dollars will now sell for ten thousand dollars. If the government should increase the single tax

on land values to 75 per cent of the rental, bringing in seven hundred and fifty dollars in this instance, and leaving two hundred and fifty dollars to the owner, and if this should be recognized as a permanent policy, the land value left in the hands of the owner would sink to five thousand dollars. The whole of the tax for all time to come would be borne by the present owner, for he would not be able to pass it on to the tenant since the tenant already pays the full economic rent and if the landlord attempted to make him pay more than the economic rent he would refuse to rent the land. If the landlord sold the land he would not be able to pass the tax on to the purchaser because the purchaser would be willing to pay only the capitalized rent which he would himself receive. Thus, if the purchaser would receive a net rental of only two hundred and fifty dollars he would be willing to pay for the right to receive this amount no more than the sum of money which when put at interest at the current rate would produce this amount. In the present case this would be five thousand dollars. It appears, therefore, that the owner of the land at the time the single tax policy is adopted as a permanent policy will have to bear the whole future burden of the tax.

As a third merit of the single tax, the single taxers urge that after the land is once sold the tax becomes burdenless to new purchasers for the reason that they have discounted the tax; that is, in purchasing the land they have capitalized only the part of the rental which they are to receive and not the part of the rental which is to go to the government. The former owners have been hit hard by the tax but no one will ever feel it again although it will continue indefinitely to furnish revenue to the government.

A fourth argument which the single taxers put forward is that with all other taxes than that on the land removed, industry would be free to develop and would not be hampered

by the many vexatious tax restrictions under which it suffers at the present time.

220. In criticism of the single tax. — In reply to the claims of the single taxers it may be urged, in the first place, that there are a great many other forms of monopoly value which are due to the growth of society and not to the activities of the individual monopolist and which, therefore, ought to receive the same kind of treatment as that given to the land monopolist. Many single taxers recognize this fact but insist that most of these monopolies rest in final analysis upon land monopoly and they maintain that to tax the land monopoly would be to tax all other forms of monopoly. This, however, is an overstatement of the importance of land monopoly.

In the second place, it may be urged in opposition to the single taxers that the present owners of land have, as a general rule, acquired their property in good faith and with the belief that it would be protected for them by the state; and in many cases it represents the result of labor performed by the individuals who own it. It would, therefore, not only be unfair to confiscate land value while leaving all other values to the enjoyment of their owners, but it would in addition give a rude shock to the whole institution of private property, since no property holder could any longer have entire confidence in the good faith of the state and would no longer care to labor and lay aside wealth if he lived constantly under the apprehension that at any time some new group of reformers might get control of the state and confiscate his property. The result of this lack of faith in the willingness of the state to protect private property would be a swift reversion to barbarism.

In the third place it should be pointed out that although society has created land values, society is being constantly repaid for the service in some degree by the existence of an

agricultural population of independent land owners. Land ownership by a numerous agricultural population of land workers gives to democracy a stability which it is easy to underrate and which undoubtedly will contribute much to the ultimate success of this form of government. Where the land of a country is held in great tracts by absentee landlords this particular argument against the single tax loses its force. In the cities, too, where perhaps 90 per cent of the population do not own land this argument has little weight.

221. The conclusion as to the single tax. — Private monopoly in land should be treated on the same principles as other forms of monopoly. Where it is on the whole beneficial it should be retained and where its disadvantages outweigh its advantages it should be modified. For the state to confiscate land values is out of the question. While a few single taxers might not see in such confiscation a general attack upon private property, people in general would see such an attack and its effect would be much the same as if it were a general attack upon private property. If the state were to confiscate all land, and to pay the present owners the present value of the land this objection would be overcome, but it would meet the further objection that the state would receive from such confiscation no part of the present rental of land, for the reason that it would have to pay to the present owners an equivalent of the rent which it received. The state, by such a measure, however, would get for itself the future increase in land values but it would lose the advantages which come from maintaining a class of independent small farmers who own their farms. Moreover, on account of the known incapacity of the state to manage business economically, the chances are that there would be a great deal of loss connected with the large financial operations involved.

In recent years a much simpler plan of levying a special tax on the increase in land values has been put in practice in Germany and in Great Britain. A tax running as high as one third in Germany and one fifth in Great Britain of the increase in the value of land is collected usually on the occasion of the transfer of ownership of land. The German tax which has been in operation as a municipal tax for more than a decade proved itself so satisfactory that it was later adopted as an imperial tax. British experience with this form of taxation has been of briefer duration and there are still many administrative problems to be solved. Of its ultimate feasibility there can be no doubt. These taxes on the increase of land values are, however, a long way from the ideal of the single taxers.

B. SOCIALISM

222. The meaning of socialism. — From decade to decade the meaning of the term socialism undergoes such marked changes and even at any one point of time different writers assign so many different meanings to the term that in order to make any progress in a discussion of it, it is essential to frame a definition for oneself. Because of the variety of definitions it is easily possible that of two persons whose views upon all subjects relating to socialism are practically identical one should consider himself a socialist and the other should consider himself an opponent of socialism. The late General Walker, writing in 1887, distinguished between socialism and communism as follows: "Communism confines itself mainly, if not exclusively, to the one subject matter — wealth. On the other hand, Socialism, conspicuously, in all its manifestations, in all lands where it has appeared, asserts its claim to control every interest of human society, to enlist for its purposes every form of energy. So far as wealth becomes the subject matter both of communism,

on the one hand, and of socialism, on the other, we note a difference of treatment. Communism, in general, regards wealth as produced, and confines itself to effecting an equal, or what it esteems an equitable, distribution. Socialism, on the other hand, gives its first and chief attention to the production of wealth; and, passing lightly over the questions of distribution, with or without assent to the doctrine of an equal division among producers, it asserts the right to inquire into and control the consumption of wealth for the general good, whether through sumptuary laws and regulations, or through taxation for public expenditure."

To-day economists seek to escape confusion by discarding entirely the term communism. But Professor Taussig, writing in 1911 of communistic societies, said: "Usually, too, the societies have had a religious basis. But this also is not an essential characteristic; some have been frankly unreligious. It is true that those infused with a religious spirit have lasted longest, and have been most successful both in worldly and in spiritual ways." And in writing of socialism at the same time Professor Taussig said: "It proposes a complete transformation of all society. . . . This transformation is to be economic only; or, at least, accompanied by other changes only so far as they may result inevitably from those of an economic sort." Comparing these extracts from Walker and Taussig one might be led to infer that between 1887 and 1911 a religious element had been introduced into communism even though in an unessential way, and that socialism, which was in 1887 a religious as well as an economic movement, has become by 1911 a purely economic movement or practically so. Professor Seligman, in his edition of 1914, says, "The communists demand the complete abolition of all private property; the socialists ask for the abolition of private property in the means of production while retaining it in the articles of consumption." Again, comparing

Walker's views with those of Seligman, it would seem that between 1887 and 1914 socialism had lost its interest in consumption, since Professor Seligman implies that under the socialist régime consumption is not to be restricted.

Not only among the professors of economics but among the leaders of socialism as well, there has been a confusion in the meaning of socialism. Many of the earlier so-called scientific socialists had much to say of materialism and ir-religion and some of them advocated a weakening of family ties. On the other hand, many present day socialists consider that socialism is purely an economic affair and that it has nothing to do, at least nothing directly, with materialism or religion or free love. This difference of viewpoint is well brought out in John Spargo's "Spiritual Significance of Socialism." "I know perfectly well," says Spargo, "that there are many socialists who make this mistake and who regard every interpretation of socialism other than the purely economic with distrust and derision. They conceive of socialism as a matter of economics simply; deny all ideals and boast of their selfishness. Often by a strange perversity they make their creed narrow and forbidding, repelling many who would otherwise be disposed to join them."

223. Our definition of socialism. — Since there is no universally recognized meaning of socialism, and since our present interest in socialism is an economic one, we shall understand by socialism, economic socialism. The socialism which we shall discuss is the socialism which proposes that the state shall take possession of the material means of production; that is, of capital and land, and shall act as the sole enterpriser, deciding the conditions and terms upon which wealth shall be produced and saved. Moreover, according to our present conception of socialism the state shall lay down the principles according to which the wealth which is produced shall be divided among the producers of it. The

principles of distribution may be that each worker is to receive an equal share of the product ; or that each worker is to receive a share proportionate to the amount of work which he does ; or each worker's share shall be in proportion to the sacrifice which he makes ; or the division may be upon any other terms which seem desirable to the majority of the voters. After a sufficient amount of the industrial product has been set aside to renew the capital and after the remainder has been divided among the workers, the amount which is so divided shall become the individual property of the workers. There is to be common ownership of capital and land, but private ownership of consumption goods. The individual may save or waste his income as at present.

This, in general outline, is economic socialism. Many socialists, however, will not recognize it as a true picture of what socialism purposes to do. Some socialists, for instance, say that under socialism agricultural land is to be privately owned. Others say that under socialism, not the state, but the small group of workers in the local factory will manage production in the factory. Other socialists find still other objections to our statement of socialism. But it will probably be accepted by the majority of socialists as a correct statement of economic socialism.

These definite economic proposals that the state shall own the land and capital and shall manage production and supervise distribution are independent of the economic theory by which they are supported by socialists ; and yet that economic theory has played such an important part in the discussion of socialism that it will be worth while to consider here some of its outstanding features. In the Marxian system of economic speculation there are three features which stand out with especial prominence. These are the theory of value, the theory of surplus value, and the alleged demonstration that socialism is fated by an economic neces-

sity to be the solution of the present social injustice. These three features will be here discussed in the order named.

224. The Marxian theory of value. — According to Karl Marx, commodities are exchangeable for each other in proportion to the amount of abstract human labor embodied in them. The value of the commodity, says Marx, is in proportion to the labor which it contains. Since this statement is evidently inaccurate, Marx proceeds to qualify it. The value is not in proportion to the actual labor of the specific workman who made the commodity but it is in proportion to the socially necessary labor, says Marx; that is, to the labor required under average conditions of skill and industry.

It will be a sufficient answer to this contention to restate the theory of value as given in an earlier chapter. Value is due to utility and scarcity. No matter how useful an article may be it has no value if it can be had in unlimited quantity, as for example, the water of a river or of an ocean. On the other hand, no matter how little of the article there is to be had, it has not value unless it has utility, that is, the ability to gratify wants. If an article can be produced by human efforts, the labor involved in producing it will be a factor regulating its scarcity but it will not necessarily be the only factor. Moreover, in the production of some commodities the labor element is very important while in the production of other commodities this element is of very little importance or of no importance at all. Just to give one illustration, a hundred dollars' worth of iron dug from the bowels of the earth will probably represent a very different expenditure of labor from a hundred dollars' worth of meteoric iron which has fallen from the heavens. Marx did not disregard this fact and in order to square it with his theory he attempted to make room for the influence of utility in determining value by saying, "If the thing is useless, so is the labor contained in it; the labor does not count as labor and therefore creates

no value." This reduces the Marxian explanation of value to an absurdity. The value of a commodity is in proportion to the labor embodied in it, he says in effect, or at least if it is not so, it is in proportion to so much of the labor embodied in it as we shall count. The secret of value, then, it would appear, is not the labor in the commodity but rather the Marxian system of determining how much of that labor is to be counted. But this system is too subjective for scientific purposes.

225. Surplus value. — Marx's theory of surplus value is another important part of his system. In half a day, let us say, the laborer can produce a value equivalent to the cost of his labor power; that is, he can produce in half a day enough to maintain himself for the whole day. But he sells to the capitalist his labor power for the whole day. The capitalist pays him the cost of the labor power, or in this instance, a half-day's product, and gets the other half-day's product for nothing. This exploitation of the laborer is the source and the only source of profits and rent, according to Marx. If Marx is correct in this, the interesting question arises why do capitalists sometimes prefer to invest their money in machinery and expensive plant where little labor is required rather than in those industries where much labor and little machinery are required? Or, to put it differently, how does it happen, if the exploitation of labor is the sole source of profit, that a person can get the same rate of return from an investment in a business where there is little labor to be exploited but where there is much machinery upon which interest must be paid, that he can get from a business where there is much labor to be exploited? The answer is that Marx was mistaken and that the exploitation of labor is evidently not the complete explanation of profits and interest.

226. The law of capitalistic development. — According to Marx, capitalistic production results in the creation of an

industrial reserve army of unemployed laborers. This reserve army of men who are constantly looking for employment places the workers who are employed at a disadvantage in bargaining with their employers. The result of this competition is that wages are continually lowered and the condition of the workers becomes worse and worse. Their misery increases. At the same time new methods of production and the extensive use of machinery result in the concentration of industry. The many small capitalists give way to the few large capitalists. The opposition between capitalists and laboring class grows ever more intense as the numbers of the former become smaller and their wealth increases while the numbers of the latter class increase and their condition grows worse. The rich are becoming richer and fewer and the poor are becoming poorer and more numerous according to this theory. The inevitable result of these tendencies is, that when the situation becomes ultimately unendurable the workers will rise in their wrath and throttle capitalism. The expropriators will be expropriated. Socialism will be at hand.

The objection to this Marxian demonstration of the inevitability of socialism is that the facts are incorrect. The capitalist class is not becoming smaller, but on the contrary, more numerous. The number of stockholders in our great industrial enterprises is constantly growing larger and as time goes on there are ever more persons interested in the preservation of capitalism and willing to resist any threatened industrial revolution which would deprive them of their capital. On the other hand, the condition of the working class, as a whole, is very materially better than it was fifty or a hundred years ago, and there is every indication that it will continue to improve. Under these conditions it is not at all true that a fatal necessity is hurrying socialism to us, whether we will or no.

227. A criticism of economic socialism. — To show that Marx's theories and prophecies are invalid is not by any means to establish the weakness of economic socialism. If Marx's theories and prophecies were well founded, they would constitute a powerful argument for the justification and future existence of socialism. To show that they are ill founded is negative, although useful, criticism. It is necessary also to advance positive proof of the weakness of socialism.

The principal criticism of economic socialism is that with human beings as they are now constituted it will not work. If human beings were ideally perfect, socialism could be made to work, but in that case there would be no need for the introduction of socialism because perfect human beings could get along very well under almost any economic system.

Economic socialism would not work because in the first place, assuming that the present proprietors are to be expropriated without compensation, there would be a very numerous and powerful class of people opposed to socialism from the start. Socialism, even with all the members of society well disposed towards the plan, would find it hard to get along; but with these ex-proprietors arrayed against it, it would be overturned before it was well started. It is true that some socialists propose to buy up the interests of the present proprietors and thus to escape their opposition. But this plan, too, involves saddling the state with heavy interest charges or else burdening the people with excessive taxes. To do either of these things would be to handicap socialism at the start and to make its success impossible.

If economic socialism were really started and under way, it would be found to be much less productive than the present competitive system. While a much fairer distribution of wealth than the present one is easily thinkable and might even be worked out with a fair degree of success under socialism, still if the amount to be divided was diminished as a

result of socialism, it requires only an elementary knowledge of mathematics to realize that the average share to be divided would be much smaller than it is at present. A great many of the workers then would find that they would have to be content with a smaller income than under the old system. Unless human nature is to undergo a very material change for the better the discontent thus engendered would lead to a powerful demand for a return to the old system.

That socialism would mean a lessened production there is no room to doubt. Visionary reformers may dream of a time when the whole productive process will be nothing but a great round of pleasure for the workers. But that vision belongs so far in the future that it is idle for economists to speculate about it. As far as we can see into the future of industrial production the average day's work will contain much that is monotonous and disagreeable. Men will shirk work and some form of pressure will have to be applied to keep them at work. An equal division of the product is out of the question for this purpose; a division according to needs does not fit the case any better. If the worker's share is to be the same whether he works well or ill or does not work at all, he will probably choose not to work. Of course, there remains the possibility of rewarding the worker roughly according to the work which he does, which is practically done at present. But to divide the product among the workers in this manner under socialism involves many difficulties which are not met with under the competitive system. At the present time one man may be paid two dollars a day for using a pick and shovel and another man may be paid two dollars and a half a day for driving a team. There is no way of determining which man has produced greater wealth. One man is paid 25 per cent more than the other not because he has produced 25 per cent more but because the demand for teamsters is stronger relatively to the supply than the

demand for shovelers relatively to the supply of shovelers. Under socialism it would not be possible to fix wages on the demand and supply principle. Any other principle which is chosen would be an arbitrary one. It would leave many of the workers dissatisfied. To-day, when a man is dissatisfied with the principle according to which his wages are regulated he often joins the socialist party. Under a system of socialism if a man became dissatisfied with the principle governing his income, he would join the antisocialist party and do what he could towards overthrowing socialism. There would be enough men joining the antisocialist party to make the continued existence of socialism to say the least problematical.

Under a system of socialism and in a democracy every laborer would probably be a voter and would help to elect the officials who assigned the tasks and fixed the wages. Again, unless human nature changes, one group of workers or the workers of one locality would think that they were unfairly treated as compared with another group of workers or the workers of other localities. They would attempt to right their wrong through the use of their political strength. The present form of political lobbying by which the government spends enormous sums upon expensive post-office buildings where there is an inconsiderable amount of mail, or in deepening the channels of hypothetical rivers which contain no water, would be a comparatively innocent pastime as compared with lobbying where whole sections of the country or great economic groups were using their political power in a struggle to increase their shares of the social dividend.

QUESTIONS

1. Are problems of distribution likely to receive more attention in a community where every one is poor or in a community where there are rich and poor?

2. What is the plan of reform which is put forward by the single taxers? What is the difference between the proposals of the more radical and those of the more moderate single taxers?

3. What arguments do the single taxers advance in support of their proposals?

4. Discuss the merits of the single tax plan.

5. What special taxes on land values have been adopted in Europe in recent years?

6. Are writers on socialism agreed upon the meaning of socialism? Illustrate.

7. Define socialism.

8. Are the proposals for economic reform which are advocated by socialists dependent upon the economic theory put forward by them?

9. Will two commodities upon which exactly the same amounts of labor have been expended always have the same exchange value? Explain.

10. Upon what does the value of an article depend?

11. What is Marx's explanation of the source of profits? Discuss this explanation.

12. What is the so-called law of capitalistic development?

13. Why is economic socialism impossible of realization within a period of time short enough to make it of practical interest to us?

SUPPLEMENTARY READING

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WALKER, *Political Economy*, Part VI., Chaps. x. and xviii.

CHAPTER XIX

PRACTICAL ECONOMIC PROBLEMS

228. State activity in economic matters. — In the preceding pages little has been said concerning the proper attitude of the state with regard to questions of economics. This has not been because the importance of the influence of the state in the economic sphere and the duty of the state to take an active interest in the economic well-being of its citizens has not been recognized. It has rather been because in the plan of the present volume it has seemed wiser to simplify the discussion by taking the activity of the state for granted and focusing the attention upon the result of the play of individual interests. The writer, however, has no sympathy with the school of economic thought which would attempt to assign to the state simply the rôle of a policeman in economic affairs with the duty merely of preserving order among the contestants in the economic struggle. To preserve the figure of speech, the duty of the state is rather to formulate the rules of the contest and to improve them from time to time as rapidly as the best interests of the whole body of the contestants will admit. It is the duty of the state to preserve the competitive system but it should preserve it as a means and not as an end. In so far as the larger interests of society are injured by permitting the free play of competition, it is the duty of the state to interfere and to suspend the operation of the competitive system. Just where the line shall be drawn between free competition and state activity is too intricate a question to be settled

here. A brief consideration of a few practical questions involving state activity will, however, indicate the nature of the problem which the state has to meet.

A. THE TRUST PROBLEM

229. History of the trust. — The combination of sellers of commodities for the purpose of restricting competition and securing higher prices has a very ancient history. Sometimes such monopolies have been carried on in violation of the law and at other times under legal privileges granted by the state. But never before have combinations of former competitors been organized into compact business units on the scale which has prevailed during the last twenty-five or thirty years. Ever since the time of the Civil War, attempts have been made in various forms to bring together competing businesses so as to eliminate competition. These earlier combinations known as pools did not go so far as the present trusts in the consolidation of conflicting interests. They were rather temporary agreements among competing manufacturers and they were constantly being broken because some short-sighted individual of the group saw that it would be to his immediate interest to break faith with his fellows. These pooling agreements took on various forms. Sometimes the total business was divided and each manufacturer was given a percentage to handle. Again an agreement was made limiting the output of each factory. Another form of pool divided the country among the different manufacturers and assigned to each a special territory in which to sell his goods. Sometimes a selling association was formed to market the product of all of the members of the pool, or an agreement was made among the members of the pool not to sell their products below a certain price. But whatever the form of agreement it usually happened that some member or members of the pool secretly violated it.

Since the agreement was contrary to public policy, in that it was in undue restraint of trade, the courts refused to enforce its provisions. It became desirable, then, for those who would eliminate competition to find some stronger bond of union.

The Standard Oil Company in 1882, recognizing the weakness of the prevailing forms of pools, organized the Standard Oil Trust. In this form of organization the stockholders in the separate companies assigned their stock to a board of nine trustees and gave them an irrevocable power of attorney to vote the stock. In return for their original stock, the stockholders received trust certificates from the board of trustees. The dividends of the combination were divided on the basis of the trust certificates and not on that of the shares of stock in the original companies. When it was for the good of the whole group the plant of one of the companies might be shut down entirely without harming the stockholders of that company. They received dividends not of the profits of their company but of the profits of the trust as a whole. Other combinations soon adopted this form of trust organization, but it soon developed that the courts were unfriendly to it and a reorganization was necessary.

It happened that the nine trustees of the Standard Oil Trust owned a majority of the trust certificates. When the old trust was dissolved the reorganization was made in such a way that the nine individual trustees together held a majority of the stock of each of the twenty corporations into which the trust was divided. It was thus still possible for these nine individuals to direct the affairs of the twenty corporations as effectually as when they formed the board of trustees. The next stage in the trust development of the Standard Oil took place when one of these corporations, the Standard Oil Company of New Jersey, increased its stock and exchanged this stock for the stock of the other Standard Oil Companies.

The New Jersey Standard Oil Company had now become a *holding corporation*. The combination was more securely consolidated than ever before. This form of consolidation through the holding corporation had already been adopted by other trusts and in recent years it has been the typical form of organization.

230. The causes of trusts. — Among the foremost of the causes usually assigned for the formation of trusts is cut-throat competition. Where competition has reached that degree of ferocity where each competitor is mainly interested in driving his opponent from the field and where no one is making profit, a stage of sanity is usually arrived at where the surviving competitors realize the futility of the struggle and see the advantage of living in harmony. They are now in a good frame of mind for organization, and trusts have often been formed under such circumstances as these.

A second cause often assigned for trusts is to be found in the saving which comes from consolidation. Wasteful advertising is eliminated; superfluous salesmen are discharged; collections from customers may be more vigorously prosecuted; cross freights may be avoided; and the more efficient plants may be run at full capacity while the less efficient may be run or not as the demand for the product of the trust dictates.

A third important cause of trusts lies in the fact that at certain periods the investing public is eager for new securities in which to invest. At these times promoters and financiers are able to reap fortunes by organizing trusts even where there is no industrial reason for their organization and supplying the eager public the much desired stocks and bonds. That the trusts may not be able to pay interest and dividends is often a matter of only secondary consideration to the promoters and underwriters. They make sure, at any rate, that their own profits are secure.

The tariff has sometimes been called the Mother of Trusts. While a great many of the trusts do not owe anything to the existence of a protective tariff, it is undoubtedly true that where the trust product is protected from foreign competition by a protective tariff some of the success of the trust may be ascribed to protection. Other forms of special privilege which sometimes aid the trusts in maintaining their positions are the control of patents, trade marks, or other forms of legal monopoly.

231. The evils of trusts. — While the matter is one about which there is a great difference of opinion, the evidence on the whole seems to point to the conclusion that trust prices are higher than the prices which prevail under competitive conditions. This is what might reasonably be expected in so far as the trust is able to establish a monopoly. However, the mere fact that the trust charges higher prices than are charged under competition does not constitute an evil unless excessive prices are charged. It may be more economical in the long run to pay reasonable prices to the trust than to pay cutthroat prices to competitors who are selling at a loss.

A second evil in connection with the trust grows out of the secrecy with which its affairs are managed. This makes it possible for promoters and later for directors to misrepresent its financial conditions and thus to hoodwink innocent investors and stockholders. With the stock liberally watered the man who invests without inside information engages in a lottery. Again, the directors may be concealing profits when they exist or declaring dividends when they do not exist, and so manipulate the value of the stock as to injure the stockholder to their own advantage.

Especially baneful is the influence of the trusts upon competitive business. The trusts not only drive their own competitors out of business by unfair practices but they lower the tone of business generally through the fact that they stand

out prominently as successful businesses whose success is often due to unfair competition. It is not to be wondered at, therefore, that the managers of smaller enterprises are often led by their admiration for that success to copy trust methods.

Finally, the political evil resulting from the trust must not be overlooked. The trusts have at stake important interests which are constantly threatened by hostile legislation. To save themselves from the danger they are practically compelled to go into politics. Thus, they are constantly seeking favors at the hands of the legislatures. They find that it is worth their while to corrupt legislators so as to accomplish their ends. The resulting harmful effects not only of the actual bribery of lawmakers but even of the widespread suspicion of bribery can hardly be overestimated.

232. Remedies for the trust evil. — In the early days of the trust the attempt was made to regulate or to abolish it by state laws. It was soon found, however, that this method was ineffective, and so in 1890 Congress passed the Sherman Antitrust Act, which provides that "Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the states, or with foreign nations, is hereby declared to be illegal. . . . Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons to monopolize, any part of the trade or commerce among the several states, or with foreign nations, shall be deemed guilty of a misdemeanor."

This legislation, drastic as it appeared at first, although it has not been without beneficial results, has been far from sufficient to cope with the situation. It was early seen that something else was needed. For a time it was thought that publicity was the panacea. In line with this thought the Bureau of Corporations was established to investigate corporations other than common carriers doing an inter-

state business, and to report its findings to the President in order that he might make suitable recommendations to Congress. Under the Trade Commission Act of 1914 the powers and duties of the Bureau of Corporations were taken over by the Federal Trade Commission, which was then constituted, and certain additional investigatory and administrative functions were added. The same Congress passed the Clayton Act declaring certain corporation practices unlawful and leaving the enforcement of its principal prohibitions to the Federal Trade Commission.

While there is no reason for believing that the recent legislation will remedy all of the evils of the trusts at once, there is every reason to hope that, with a strong board giving constant attention to the problems and asking Congress for additional power as it may need it, the trust will ultimately be harnessed to do the people's work and that the more flagrant abuses will disappear. If, as is widely maintained, the trusts exist because they represent the economies of large scale production, they will continue to exist and their advantages will be preserved. If, on the other hand, their existence is primarily due to their unfair practices, they will come to an end.

B. LABOR LEGISLATION

233. Child labor legislation. — With the introduction of the factory system in the textile industry in England in the latter part of the eighteenth century, it became possible to substitute in a large measure child labor for adult labor. Manufacturers found it profitable to take children from the parish workhouses or to purchase them from dealers in children for the purpose of keeping them employed in their factories practically as slaves, under conditions of utter brutality. In 1802 Sir Robert Peel succeeded in having a law passed which was considered very advanced legislation in

that day and which provided that for these pauper factory children twelve hours should constitute a day's labor. But this law applied only to pauper apprentices. Other children were free to work longer hours. Then the Act of 1819 was passed, an act so radical that it was never enforced. It forbade the employment of children under nine years of age in certain factories and limited the hours of those between nine and sixteen to twelve hours per day. But as time went on public sentiment was developed and the laws became more restrictive and their enforcement more certain, until finally, through child labor legislation and educational restriction, the life of the child had been comparatively well safeguarded in England.

While the conditions of child labor in the United States have never been so bad as they were at their worst in England, there has always been much room for improvement. At the present time in states having more advanced legislation, children under fourteen years of age are not allowed to work in a great many occupations; young persons between fourteen and sixteen or fourteen and eighteen have had their number of hours per day limited to eight, and night work for minors has been abolished wholly or in part. On the other hand, some of the southern states have been very backward in legislating for the protection of the child. Extremely long days are still permitted for children of tender years and such protective legislation as there is, is seldom enforced. Since the children of to-day are the fathers and mothers of the coming generation it requires no extended argument to show that the state's duty to itself demands that it preserve their vitality. Fortunately, there are several agencies, such as the National Child Labor Committee, which are spreading the gospel of the need of adequate protection for children. The task is a very large one and the process must be slow, but it is gratifying to know that there is steady progress in this direction.

234. Hours of labor legislation. — The objection is made against legislation designed to limit the length of the work-day that it is unconstitutional in that it restricts the freedom of contract of the worker. This objection is not urged in the case of legislation restricting the hours of labor for children, and in recent years it has ceased to be urged in the case of women workers. It is generally granted now that in the case of these two classes the state has the right under its police power of enacting such legislation.

Although it is only within recent years that American courts have been willing to grant the constitutionality of laws limiting the number of hours for women, at the present time most of the states have such legislation. This legislation usually provided for a ten-hour day with a limit of fifty-two or fifty-four hours a week. In some cases the working day is limited to nine or even to eight hours.

In the case of men the right to enact hours of labor legislation has been more stubbornly contested. Partly for this reason, and partly because of the power of labor organizations, the effort to secure a shortened workday for men has for the most part taken the direction of collective bargaining rather than legislation. But even here something has been secured by legislation. In fourteen states an eight-hour day has been secured for the workers in mines. Such work because of its peculiar nature was held to come under the police power of the state. In various other businesses in which there is a special public interest, such as smelting, electric lighting, rolling mills, bakeries, and cotton and woolen mills, there has been legislation by a few states restricting the number of working hours. In one state a ten hour day has been provided for by legislation in every "mill, factory, or manufacturing establishment," but this law is being attacked in the courts. In many of the states there are laws limiting the length of the workday for men employed on public work. In

this case, however, the police power need not be invoked since the state is the employer and may make such contracts with its employees as are mutually satisfactory. Similarly, in a number of cases there has been legislation requiring that a prescribed minimum wage be paid for labor upon public works. But this legislation is not usually thought of as minimum wage legislation.

235. The legal minimum wage. — Although there has been much experience of minimum wage legislation for men in Australia and a certain amount of it in England, it has not been tried in this country. In this case, as in the case of the legislation regarding maximum hours, the objection is made that the legislation does not fall within the police power of the state and is unconstitutional since it interferes with the freedom of contract. The minimum wage for men, therefore, has been the minimum wage established by the collective bargaining of labor organizations. Several states have, however, undertaken to pass minimum wage laws for women and minors. Sometimes this legislation declares it unlawful to employ women at a rate lower than that declared by the statutes to be a minimum wage. Another and a more usual method is to establish a Commission whose duty it is to investigate and to learn what wage will support the women workers according to a decent standard, and to declare such wage the legal minimum wage. As a rule in states having this legislation employers are prohibited from employing women workers at a wage lower than the legal minimum but in some cases there is no other sanction for the enforcement of the law than public opinion. The Oregon minimum wage law was the first to be brought before the United States Supreme Court, where it is still pending at the present writing.

236. Legislation for the protection of life and health. — Not less important than the legislation restricting hours and providing a minimum wage is that which safeguards the

lives and health of the workers. In recent years elaborate codes of laws have been developed by the more progressive states providing for the fencing in and the covering over of dangerous machines and work places and for proper lighting and ventilation of factories. Industries which are especially dangerous receive special attention.

Not long ago a federal law was passed which put an end to the manufacture and sale in this country of matches in the making of which white phosphorus was used. The purpose was to protect the workers from the loathsome and dangerous disease known as phosphorus necrosis. For the workers in the mines, too, much protective legislation has been enacted. The need for legislation of this general character is so evident to any one who gives thought to the matter at all that it is, comparatively speaking, not difficult to have such legislation passed. The principal difficulty comes in having it enforced, for the workmen themselves are often too careless and indifferent to insist upon or to desire its enforcement and the employers often find it burdensome. At the present time there is a widespread need of better factory inspection and better enforcement of factory legislation.

C. SOCIAL INSURANCE

237. The meaning of social insurance. — Insurance, in general, is a device by means of which risks are distributed in such a way as to lessen the economic burden to those upon whom it would otherwise fall more heavily. In case of fire insurance, for example, any one of a thousand houses may be burned during the coming year. There is danger for all house owners. But if each householder pays to an insurance company a small sum of money which he will scarcely miss, he may receive the assurance that in case his house does really burn he will be reimbursed for the larger part of the value. Or in the case of life insurance, while each person knows that

he will some day die, the time of his death is uncertain. He does not know whether or not he will live long enough to make suitable material provision for his dependents. By paying a small sum of money yearly to the insurance company he receives assurance that upon his death, whether soon or late, his dependents will receive a substantial sum of money.

Although all insurance is in a sense social in its nature, a distinction is made between commercial insurance and social insurance. Commercial insurance is insurance which is conducted as a competitive business. The insurance company collects premiums from different individuals who are subject to the hazard in question. These premiums must be sufficient in the long run to pay the losses to the insured and to pay for the management of the insurance business. Considerable sums of money are paid by insurance companies in advertising and attracting customers. Where the amount for which the insurance is issued is large these expenses for securing the business become relatively small. On the other hand, where persons can afford insurance only in small amounts the cost of securing business often becomes so great as to be prohibitive.

Social insurance is working-class insurance. Here the amounts for which insurance is issued are usually small and the costs of administration relatively large. The result is, that while this class is urgently in need of insurance in various forms, the profits of the business are not sufficient to induce commercial companies to go into it. Moreover, some of the hazards which are borne by the working class are placed upon them unfairly and ought to be borne by the businesses which employ them or by society in general. Since the least well provided for of the workers will not or cannot afford commercial insurance and since the state has a direct interest in guarding them from disasters which they are likely to meet from

unforeseen eventualities, it becomes the duty of the state to assist them to secure insurance. This state-assisted insurance is called social insurance to distinguish it from competitively secured insurance, which is called commercial insurance.

238. Workmen's compensation. — When a workman is killed or injured in the course of his employment his family is deprived permanently or temporarily of his income. Formerly the view was held that this stoppage of income was the concern solely of the family of the injured man and was a matter about which the state and the employer need not take thought. Of course, if the employer was negligent and the worker was without blame, he or his representatives might collect damages. But if the employee was to blame or if some fellow employee was to blame for the accident or if it was a case of pure accident where no one was to blame, the injured man or his representatives had no recourse.

To-day, this view of the irresponsibility of employers and the state for industrial accidents is beginning to be considered antiquated. If employers are compelled to accept and to pass on to the consumers the burden of the cost of mules which are killed in their establishments, why, it is asked, should they not accept and pass on to the consumers at least the burden represented by the funeral expenses of workmen who are killed at their employment? If society through its charities must take care of the family which has been deprived of an income because of an industrial accident, why would it not be better to organize a system of insurance which would provide an income for families deprived of their wage earner?

As a result of the new way of looking at the problem of industrial accident thirty-three states have passed workmen's compensation laws within the last five years. The laws, which vary from state to state, are alike in principle. They provide,

in general, compensation for all injuries by accidents arising out of and in the course of employment, including deaths resulting therefrom. In some cases occupational diseases, as for example lead poisoning, are included. In general, the injured person is given reasonable medical, surgical, and hospital services for a limited time, varying from two weeks to three months. Where death occurs a percentage of the former income is usually paid to dependents. In several of the states this payment amounts to two-thirds of the former wages. In Massachusetts, two-thirds of the wages is paid for five hundred weeks. In New York the payment is made during the dependency of the dependents. In Ohio, the period is six years. Where total disability of the injured person takes place, in several of the states two-thirds of the wages are paid during the period of total disability whether that is temporary or permanent. Where the disability is partial some of the states require the payment of as high as two-thirds of the loss of earning power during the period of disability. In general the employers must provide the funds out of which the payments are to be made by insurance or otherwise. In some cases, the employees also contribute to the insurance fund.

239. Sickness insurance. — In the United States up to the present time there has been no compulsory sickness insurance with the exception of those cases where occupational diseases are included in the scope of the workmen's compensation laws. There is, however, a growing sentiment that the interest of society in the matter of the sickness of its members is so important that it ought to take measures to see that they are insured against sickness. Compulsory sickness insurance has been in existence in Germany for more than thirty years and it has been recently adopted in England. It is to be expected that it will soon be tried in this country. The Germans distinguish between temporary sickness and

invalidity. Sick benefits which were formerly paid for the first thirteen weeks of illness have been in recent years extended to cover a period of from six months to a year. The payments are made out of an insurance fund to which the employers have contributed one-third and the employees two-thirds. The benefit paid during sickness in Germany is one-half the wage. In addition to this, medical and hospital benefits are given. Under the English system of sickness insurance the state as well as employer and employee contributes to the insurance fund.

240. Insurance against old age, invalidity, and death. — For the purpose of taking care of the workers and their families in their old age two different plans of relief have been worked out: first, compulsory old age insurance, and second state pension systems. In Germany and France, which with several other European countries have the system of compulsory old age insurance, payments to the insurance fund are made by both employers and employees. The old age pension begins in Germany at the age of seventy and in France at the age of sixty. Great Britain in 1908 adopted a system of non-contributory old age insurance. The whole of the burden is borne by the state and benefits of from one to five shillings per week are paid to persons of over seventy years of age whose income does not exceed thirty-one pounds and ten shillings a year.

By invalidity is meant under the French system total and permanent disability to earn a living. Under the British system invalidity means total disablement but not necessarily permanent disability. Under the German law a disability reducing the earning capacity to one-third of the normal establishes invalidity. As a general thing the state as well as employer and employee contributes to the fund for invalidity insurance. The administration of the invalidity insurance is usually closely bound up with that of sickness or old

age insurance and the insurance itself is often difficult to distinguish from the other forms.

Where death results from industrial accidents funeral expenses and pensions to dependents are usually provided for under the recent workmen's compensation laws of this country. In addition to this protection workingmen of course have the same privilege of securing life insurance from commercial insurance companies and from fraternal societies as have other persons. Several of the American states have adopted systems of mothers' pensions or widows' and orphans' pensions. The first of these pension acts was passed by Illinois in 1911. These pensions are grants made by the state and they do not involve the payment of premiums for insurance. In the European systems, on the other hand, there are systems of compulsory life insurance, to the funds of which employers and employees as well as the state contribute.

241. Unemployment insurance. — An evil almost as serious to the wage earner's family as sickness or industrial accident is unemployment, with the cessation of wages that it entails. In either case the family income is cut off and where there are no savings to fall back upon recourse must be had to charity. In the past there has been a tendency in many quarters to consider unemployment a fault of the worker. Men were out of work, it was thought, because they were lazy or incompetent or preferred not to work. It is true that a certain part of the unemployed are also unemployable. They are persons who cannot secure and hold positions because of physical or mental or moral defects. But the great mass of the unemployed are persons who are employable. It is in many cases their misfortune and not their fault that they cannot get work. The causes of unemployment are to be sought for in the nature of industry rather than in the character of the workers.

One cause of unemployment is to be found in the fluctuation in the demands for labor rather than in the absolute lack of demand. Industry is so organized and conducted that years of plenty are followed by years of depression. Industry revolves in cycles. During the years of prosperity in the industrial cycle there is a strong demand for labor. When the years of depression approach production is curtailed and men are thrown out of employment. It is not that men are unable or unwilling to work. The simple fact is that their services are no longer needed by the industrial machine. In addition to this cyclical unemployment there is a seasonal unemployment which is due to alternating good and bad seasons for different industries within the year.

Among the causes of this alternating demand for labor are climatic conditions, social customs and traditions, and the seasonal demand from other industries. Finally, there is the employment due to fluctuations in the casual trades where there is an alternating rapidly increasing and decreasing volume of demand for labor ; as, for example, in the case of the longshoremen, who are employed in large numbers upon jobs lasting for a few hours or a few days and who are discharged as soon as the jobs are completed.

A number of proposals have been made to relieve the unemployment situation. In the first place, it is proposed to regularize industry by shifting work from the years and seasons of prosperity to years and seasons of depression. This could be done to a certain extent in private industry if a sufficient effort were made, and in the case of public works it could be done to a considerable extent without the exertion of much effort.

A second proposal is to develop and improve our system of labor exchanges or employment agencies and especially public labor exchanges. The more efficient these labor exchanges the more quickly will employer and employee find each other

and the less time will be wasted by the employee in looking for work. Much good will come out of the present agitation for better labor exchanges but it must be remembered that, at best, the labor exchange can only find opportunities for work. It does not make these opportunities where they do not already exist.

A third proposal is to develop a system of continuation schools where boys and girls who now leave school after finishing the eighth grade would learn skilled trades at which they could earn their livelihood. By attending such schools during the months of greatest unemployment these young persons would be kept out of competition for the positions held by older persons, and at the same time they would be making themselves more useful citizens. At the present time there is a widespread demand that the army of the United States be very materially increased. If the army were to be increased to three hundred thousand or five hundred thousand men to be kept permanently in training as soldiers, it would tend to relieve the unemployment situation temporarily but in the long run unemployment would be just as bad as before, because fluctuations in industry would continue as before. If, however, instead of keeping the same men permanently under arms, the army were to be greatly increased during periods of much unemployment and diminished during times of great demand for labor much would be done towards solving the problem of unemployment. That such a plan could be carried out without detriment to the efficiency of the army does not admit of a doubt.

Since practically every worker runs the risk of being unemployed, and since at any given time only a small part of the total number of workers are actually unemployed, the case would seem to offer a good field for insurance ; that is, for distributing the risks in such a way that the burden would be borne by all who were exposed to the risk. The worker

who was out of employment would receive unemployment benefits from the insurance fund to support him until he found work. There is, however, a serious difficulty in the application of this kind of insurance. It is extremely difficult to tell to what extent the victim of unemployment has contributed and continues to contribute to his being unemployed. Many trade unions in this and in other countries have this form of insurance; that is, they pay benefits to members who are out of work, but the trade unions are in an exceptionally good position to be able to judge of the genuineness of the unemployment of their members. For this reason foreign countries which have adopted the policy of granting subsidies to the unemployed have usually done so through the medium of trade unions.

The first nation to adopt a system of compulsory unemployment insurance was Great Britain, which in 1911 provided for the compulsory insurance of about two and a half millions of workers in a number of trades which were peculiarly subject to periods of unemployment. Under the British system one-fourth of the cost of the insurance is paid by the state and the other three-fourths is paid in equal parts by employers and employees. The cost to the worker is two and a half pence per week and the benefit in case of unemployment is seven shillings per week. This benefit is to be paid from the second to the fifteenth week of unemployment in each year provided that the insured has worked at least twenty-six weeks in the year for the last three years, in an occupation subject to compulsory insurance; that he has not become unemployed through strike or through his own fault; and that he does not receive from the labor bureau information of work of equal value.

242. Conclusion. — It is easy to object to compulsory social insurance, as to state activity in any form, that it interferes with the self-activity and the self-development of

the citizens of the state. But where the citizens are not doing and apparently will not do the necessary thing for themselves the objection loses its force. The reason that the state should not engage extensively in economic production is that the state is relatively inefficient in this field as compared with private producers. But in those fields in which state activity is much superior to individual effort state activity is to be desired. This does not mean that even here the state should crush out the spirit of self-help among its citizens. It can be active and at the same time develop the spirit of self-help rather than hinder it. This is seen, for example, in the British insurance act of 1911, which operates through trades unions, fraternal societies, and other local bodies.

QUESTIONS

1. Has the state a right to interfere with the free play of competition in economic affairs?
2. What are pools? What was the original form of the trust? What is a holding corporation?
3. What are the principal causes of trusts?
4. What evils are caused by the trusts?
5. What is the present plan of remedying the trust evils?
6. Why is there need of child labor legislation? What are the standards of legislation for children in some of the more advanced states?
7. What objection is made to legislation regulating the hours of work for men? What restrictions have been made as to the hours of labor for women in some of the states?
8. What form has minimum wage legislation taken in this country?
9. Why is it difficult to have legislation for the protection of the life and health of workers enforced?
10. What is meant by social insurance?
11. Explain the general plan of workmen's compensation laws.
12. Speak of the European experience with compulsory sickness insurance. With insurance against old age, invalidity, and death.
13. What are the industrial causes of unemployment? What remedies are proposed?

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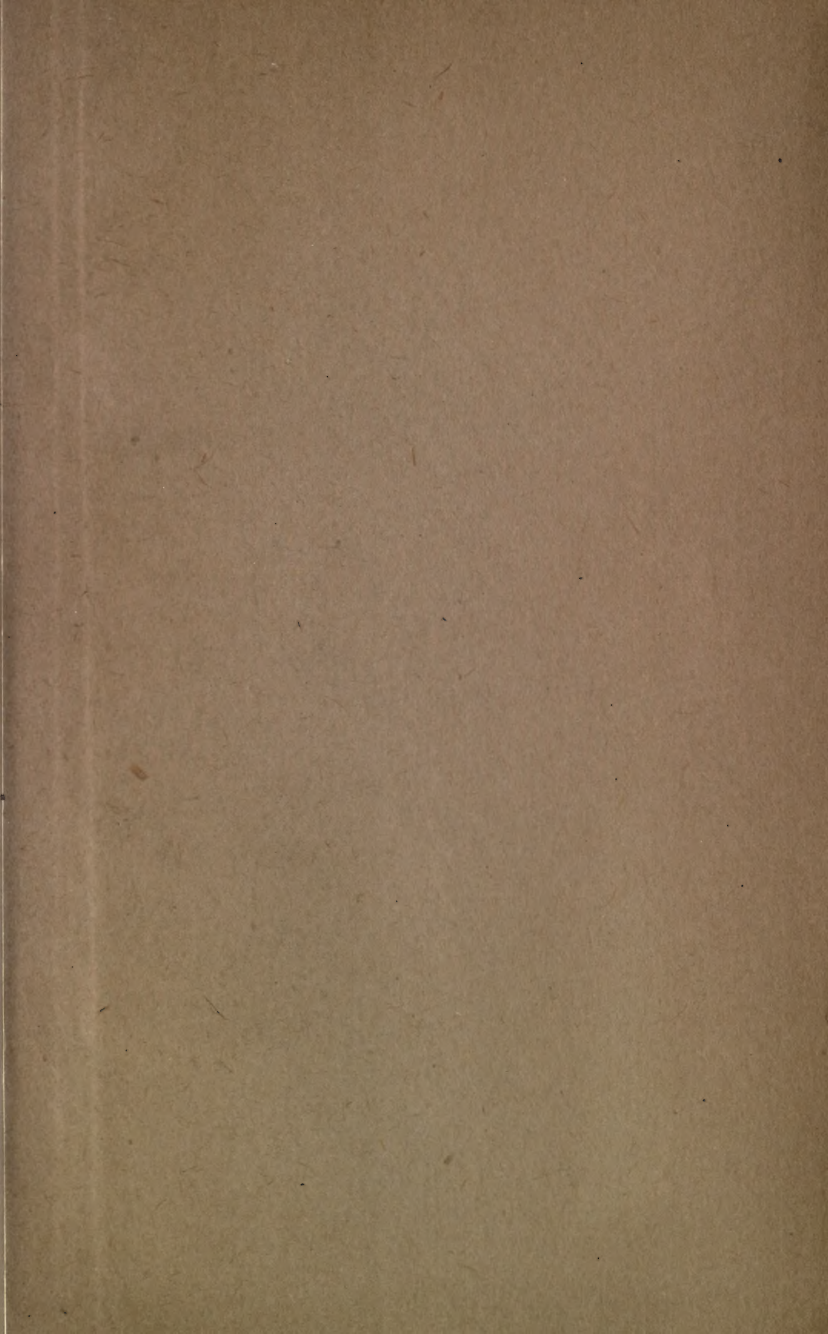
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